



Soil Solutions, Inc.

Specializing in Soil and Environmental Consulting Services
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May 31, 2020

Marty Maupin

Indiana Department of Environmental Management

Office of Water Quality

100 North Senate Avenue

MC 65-40 IGCN 1255

Indianapolis, Indiana 46204-2251

RE: 401 WQC - Marquette Greenway Trail, Burns Harbor Section

Dear Mr. Maupin,

Several communities in Porter County are working to construct a portion of the Marquette Greenway Trail, a bike and pedestrian path along the south shore of Lake Michigan. When complete, the 58 mile trail will run from Chicago, Illinois to New Buffalo, Michigan. Burns Harbor has dedicated the funding to design and build a three mile portion of the trail as it runs through the town from the eastern town limits, West Beam Street and North Babcock Road through the National Park, across State Road 149, and roughly along the National Park Service (NPS) boundary to the western limits of Burns Harbor.

This portion of the trail will run through a complex of forest, old field, wetlands, and through the floodplain of the East Branch of the Little Calumet River. Wetlands were identified and delineated within a large 260 acre project area and the preliminary trail route and project limits were adjusted based on where high quality resources or wetlands were identified to minimize impacts to these resources. The trail was originally planned to be routed entirely through NPS land but based on the large amount of wetland resources within the NPS land and the difficulty and expense in repeatedly crossing the Little Calumet River, an alternative route further south was located.

The trail route has been designed to minimize impacts to wetlands and high quality plant communities. The current trail begins at the west end of Beam Street, runs for about 1 mile through the Indiana Dunes National Park (IDNP) through Mnoke Prairie, down a forested hillslope to the floodplain of the Little Calumet River, under a railroad bridge, and back up to the top of the bluff again. The only way to cross the railroad tracks was to go under them. So it was necessary to run the trail down to the floodplain of the river, under the railroad bridge, and then back up again. After a mile the trail leaves NPS land and runs through old field and degraded flatwoods forest to end at the western limits of Burns Harbor. The trail surface will be a combination of boardwalk and asphalt trail. The trail through the floodway will be boardwalk. Most of the remainder will be asphalt. The trail will require impacts to 0.96 acres of jurisdictional wetland and 0.16 acres of isolated wetland for construction of the asphalt trail (**1.12 acres total**). A further 0.51 acres of jurisdictional wetland and 0.02 acres of isolated wetland will be crossed with a boardwalk trail with no wetland impacts. About 30% of the impacts are emergent and 70% are forested.

The National Park Service requires that all wetland impacts be mitigated within the park boundaries. Burns Harbor requires that all funds for the project be directed to work within the town limits. So,

MARQUETTE GREENWAY TRAIL PROJECT

mitigation is proposed within the portion of the IDNP within the Town of Burns Harbor which limits the options to Mnoke Prairie or the floodplain of the Little Calumet River:

The IDNP proposed restoration work within Mnoke Prairie as mitigation for the project. The prairie was an old field when NPS acquired the property with some remnant prairie species along the railroad to the south. The NPS has been working to expand the prairie over the last 15 years and has increased the diversity of high quality species on site though invasives and woody species are a continual threat. Portions of the prairie are still dominated by Canada goldenrod. The prairie has a series of drainage ditches which the NPS would like to close to restore hydrology on site.

The Town of Burns Harbor proposes to close the drainage ditches within Mnoke Prairie to increase the amount of wetland within the prairie as mitigation for the trail impacts. Initial field work has identified a series of drainage ditches with adjacent wetlands as well as other areas with drained hydric soils that would not currently qualify as wetland but that could be restored to wetland. The field visits confirmed that the ditches are still draining the site as a considerable amount of water was observed flowing through them.

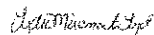
A wetland delineation identified 4.09 acres of wetland in the prairie surrounding the existing surface ditches. Soil Solutions, Inc. estimates that closing the ditches on site would expand the wetland boundary by at least 3.75 acres. Wetland expansion along with plant material install and woody and invasive control within the restoration area should be sufficient to mitigate for the 0.96 acres of jurisdictional impact and 0.016 acres of isolated wetland impacts associated with trail construction.

Enclosed is a 401 permit application for the Marquette Greenway Trail Project in Porter County, Indiana. Please find enclosed the following attachments:

Appendix A	IDEM Permit Application
Appendix B	Location Maps, Existing Conditions, and Exhibit Drawings
Appendix C	Wetland Impact Drawings and Cross Sections
Appendix D	Impact Photos
Appendix E	Project Drawings
Appendix F	Environmental Assessment
Appendix G	Floristic Quality Assessment
Appendix H	Mnoke Prairie Mitigation Letter of Support
Appendix I	T&E Species Letter
Appendix J	Wetland Delineation Report
Appendix K	USACE Section 404 Permit

Thank you for your review of this submittal. If you have any questions or would like to discuss this submittal, please call me at (219) 465-5885.

Thank you,



Lydia Miramontes Loyd
Soil Solutions, Inc.

Appendix A: IDEM Permit Application

1. IDEM Application for Authorization to Discharge Fill Material
2. Additional Information



**APPLICATION FOR AUTHORIZATION TO DISCHARGE DREDGED
OR FILL MATERIAL TO ISOLATED WETLANDS AND/OR
WATERS OF THE STATE**

State Form 51821 (R2 / 11-15)

Indiana Department of Environmental Management

- INSTRUCTIONS:** 1. Read the instruction sheet before filling out this form.
2. You must complete all applicable sections of this form

1. Applicant Information		2. Agent Information	
Name of Applicant Eric Hull, Town of Burns Harbor		Name of Agent John McQuestion, Soil Solutions, Inc.	
Mailing address (Street/ PO Box/ Rural Route, City, State, ZIP Code) 1240 N Boo Road Burns Harbor, Indiana 46304		Mailing address (Street/ PO Box/ Rural Route, City, State, ZIP Code) P.O. Box 229 Valparaiso, Indiana 46384	
Daytime Telephone Number 219-787-9413		Daytime Telephone Number 219-465-5885	
Fax Number 219-787-1353		Fax Number	
E-mail address (optional) ehull@burnsharbor-in.gov		E-mail address (optional) jmcquestion@soilsolutions-inc.com	
Contact person (required) Eric Hull		Contact person Lydia Loyd	
3. Project / Tract Location			
County Porter		Nearest city or town Burns Harbor	
U.S.G.S. Quadrangle map name (Topographic map) Chesterton and Portage Quads		Project street address (if applicable) Burns Harbor, Indiana 46304	
Quarter	Section 31, 32, 33, 34	Township 37 N	Range 6 W
Type of aquatic resource(s) to be impacted (Attach Worksheet One.) Emergent and forested wetland		Project name or title (if applicable) Marquette Greenway Trail	
Other location descriptions or driving directions The project area is a three mile section of trail that runs through Burns Harbor from the eastern town limits, W Beam St. and N. Babcock Rd. through the Indiana Dunes, across S.R. 149, and along the NPS boundary to the western limits of Burns Harbor. The area can be accessed from the west end of Navajo Trail or north of the intersection of Babcock Rd. and W. Beam St.			
4. Project Purpose and Description (Use additional sheet(s) if required.)			
Has any construction been started? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Anticipated start date (month, day, year) July 1, 2020	
If yes, how much work is completed?			
Purpose of project and overview of activities The purpose of the project is to develop a paved trail through the Town of Burns Harbor as part of the Marquette Greenway Trail. The trail will be accessible from a parking lot at the west end of Navajo Trail. Eventually, the trail will continue to the east into the Town of Porter and west into the City of Portage. The project is being let in three phases. Phase 3 will begin construction on July 1, 2020. Phase 1 will be completed after, while Phase 2, the final phase will be completed by September, 2022. Several communities in Porter County are working to construct a portion of the Marquette Greenway Trail, a bike and pedestrian path along the south shore of Lake Michigan. When complete, the 58 mile trail will run from Chicago, Illinois to New Buffalo, Michigan. Burns Harbor has dedicated the funding to design and build a three mile portion of the trail as it runs through the town. The trail route has been designed to minimize impacts to wetlands and high quality plant communities. The trail begins at the west end of Beam Street, runs for about 1 mile through the Indiana Dunes National Park (IDNP) through Mnoke Prairie, down a forested hill slope to the floodplain of the East Branch of the Little Calumet River, under a railroad bridge, and back up to the top of the bluff again. After a mile the trail leaves NPS land and runs through old field and degraded swamp forest to end at the western limits of Burns Harbor. See attached for more info.			

5. Avoidance, Minimization, and Mitigation Information: Applicants must answer all of the following questions

(Use additional sheet(s) if necessary - provide a detailed response to all applicable questions.)

A. For projects with Class II isolated wetlands –

1. Is there a reasonable alternative to the proposed activity?

Wetlands were identified and delineated within a large 260 acre project area and the preliminary trail route and project limits were adjusted based on where high quality resources or wetlands were identified to minimize impacts to these resources. The trail was originally planned to be routed entirely through NPS land but based on the large amount of wetland resources within the NPS land and the difficulty and expense in repeatedly crossing the Little Calumet River, an alternative route further south was located. Impacts to Class 2 wetlands have been minimized to 0.014 acres for the entire 3 mile long trail project.

2. Is the proposed activity reasonably necessary or appropriate?

The Class 2 impacts are minimized to the extent possible: the trail crosses these forested wetlands within narrow, excavated ditch sections. The western portion of the trail crosses through an upland wetland complex where it would be impossible to avoid all wetland impacts. The impacts are necessary to develop a bike trail through this upland wetland complex.

B. For projects with Class III wetlands, adjacent wetlands, and/or streams, rivers, lakes or other water bodies –

1. Is there a practicable alternative to the proposed activity?

n/a

2. Have practicable and appropriate steps to minimize impacts to water resources been taken?

n/a

Describe all compensatory mitigation required for unavoidable impacts.

Mitigation will be completed adjacent to the project limits, within Mnoke Prairie. The National Park Service requires mitigation for impacts within the park be completed within the park boundary. Burns Harbor requires that funds that they allocate for this project, be spent within the Town limits which limits the mitigation area to park service land within Burns Harbor. The Indiana Dunes National Park suggested hydrology restoration within Mnoke Prairie. The prairie was historically farmed and is drained by a series of surface drainage ditches. A wetland delineation was completed within the prairie to identify the existing wetland boundary. The ditches will be plugged to restore hydrology across a 3.5 acre area providing mitigation for the wetland impacts associated with the trail construction project. Woody species will be cut and treated within the wetland expansion area. The wetland restoration area will be planted with native wet prairie species to restore and expand wet prairie within Mnoke Prairie.

6. Drawing / Plan Requirements (Applicants must provide the following.)

- Top/aerial/overhead views of the project site showing existing conditions and proposed construction.
- Cross sectional view of areas of fill or alterations to streams and other waters.
- North arrow, scale, property boundaries.
- Include wetland delineation boundary *(if applicable)*. Label all wetlands (jurisdictional, isolated and exempt) as I-1, I-2, I-3, etc. and the mitigation areas as M-1, M-2, etc.
- Location of all surface waters, including wetlands, erosion control measures, existing and proposed structures, fill and excavation locations, disposal area for excavated material, including quantities, and wetland mitigation site *(if applicable)*.
- Approximate water depths and bottom configurations *(if applicable)*.

7. Supplemental Application Materials (Applicants must provide the following.)

- A wetland delineation of all wetlands on the project site *(for projects with wetland impacts)*.
- At least three photographs of the project site. Indicate the photo locations on the project plans.
- If isolated wetlands are present, a letter from the Corps of Engineers verifying this statement.
- Wetland mitigation plan and monitoring report.
- Classification of all isolated wetlands on the tract *(if isolated wetlands are present onsite)*.
- Copies of all applicable local permits and/or resolutions pertaining to the project or tract.
- Tract history *(see instructions)*.

8. Additional information that MAY be required (IDEM will notify you if needed.)

- Erosion control and/or storm water management plans.
- Sediment analysis.
- Species surveys for fish, mussels, plants and threatened or endangered species.
- Stream habitat assessment.
- Any other information IDEM deems necessary to review the proposed project.

9. Permitting Requirements

a. Does this project require the issuance of a Department of the Army Section 404 Permit from the US Army Corps of Engineers? ☒ Yes ☐ No

If no, you do not need to answer Part b.

b. Have you applied for an Army Corps of Engineers Section 404 permit? ☒ Yes ☐ No

If yes, please supply the Corps of Engineers ID Number, the Corps of Engineers District, the project manager, and a copy of any correspondence with the Corps. **If no, contact** the Army Corps of Engineers regarding the possible need for a permit application.

LRC-2018-00841; USACE Chicago District; Andrew Blackburn

c. Have you applied for, received, or been denied a permit from the Department of Natural Resources for this project? ☒ Yes ☐ No

Please give the permit name, permit number, and date of application, issuance or denial.

The trail project will require a Construction in a Floodway Permit. The application will be submitted in June, 2020.

d. Have you applied for, received, or been denied any other federal, state, or local permits, variances, licenses, or certifications for this project?

☒ Yes ☐ No

Please give the permit name, agency from which it was obtained, permit number, and date of issuance or denial.

IDEM Rule 5; Application will be submitted in June, 2020

10. Adjoining Property Owners and Addresses

List the names and addresses of landowners adjacent to the property on which your project is located and the names and addresses of other persons (or entities) potentially affected by your project. Use additional sheet(s) if required.

Name Woudema Gary & Linda/H&W Address (number and street) 317 Navaho Trl City Burns Harbor State IN ZIP Code 46304	Name Tecumseh Redevelopment Inc Address (number and street) 3210 Watling St., MC 8-229 City East Chicago State IN ZIP Code 46312
Name United States Of America Address (number and street) 1100 N Mineral Springs Rd City Porter State IN ZIP Code 46304	Name Smith Arlene Address (number and street) 319 Navajo Trl City Burns Harbor State IN ZIP Code 46304
Name Maher William K & Janet L/H&W Address (number and street) 315 Navajo Trl City Burns Harbor State IN ZIP Code 46304	Name Aponte Nikole Address (number and street) 684 E 1100 N City Westville State IN ZIP Code 46391
Name Gill Maria E Address (number and street) 1244 Chippewa Trl City Chesterton State IN ZIP Code 46304	Name Ribar Michael C Address (number and street) 1242 Chippewa Trl City Chesterton State IN ZIP Code 46304
Name Lubarski David A & Lubarski Mary Beth Address (number and street) 9022 Parrish Ave City Highland State IN ZIP Code 46322	Name Keilman Brian Address (number and street) 269 Haglund Rd City Burns Harbor State IN ZIP Code 46304
Name McCauley Joseph R & Peter B/Jt Address (number and street) 2666 Charlotte St City Portage State IN ZIP Code 46368	Name Welcome Ulrich & Dolores E/H&W Address (number and street) 1250 Coan St City Chesterton State IN ZIP Code 46304

10. Adjoining Property Owners and Addresses, Continued

Owner	Frey Michael D & Debra D/H&W
Mailing Address	1254 Coan St
City	Chesterton
State	IN
ZIP	46304

Owner	Doolin Sean P & Alicia/H&W
Mailing Address	1258 Coan St
City	Burns Harbor
State	IN
ZIP	46304
Country	USA

Owner	Worthington Steel Company The Suite 425
Mailing Address	c/o Clarus Partners
Mailing Address (ext)	1233 Dublin Rd
City	Columbus
State	OH
ZIP	43215

Owner	United States of America
Mailing Address	801 E 86th Ave
City	Merrillville
State	IN
ZIP	46410
Country	USA

Owner	Northern Indiana Public Service Co
Mailing Address	Tax Dept PO Box 117
Mailing Address (ext)	290 Nationwide Blvd
City	Columbus
State	OH
ZIP	43215

11. Signature - Statement of Affirmation

I certify that I am familiar with the information contained in this application and, to the best of my knowledge and belief, such information is true and accurate. I certify that I have the authority to undertake and will undertake the activities as described in this application. I am aware that there are penalties for submitting false information. I understand that any changes in project design subsequent to IDEM's granting of authorization to discharge to a water of the state are not authorized and I may be subject to civil and criminal penalties for proceeding without proper authorization. I agree to allow representatives of the IDEM to enter and inspect the project site. I understand that the granting of other permits by local, state, or federal agencies does not release me from the requirement of obtaining the authorization requested herein before commencing the project.

Applicant's Signature:  Date: 05/27/2020
(mm/dd/yyyy)

Print Name: Eric Hull Title: President

Worksheet – Summary of Onsite Water Resources and Project Impacts

A. Jurisdictional Wetlands (Existing Conditions)			Jurisdictional Wetlands (Proposed Impacts)		
Wetland Type	Size of wetland (<i>acreage</i>)	To be Impacted?	Acreage	Fill quantity (<i>cys</i>)	ATF
<input checked="" type="checkbox"/> EM <input type="checkbox"/> SS <input checked="" type="checkbox"/> FO	Wetland 1; 133.7 Acres	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0.282	314.9	
<input checked="" type="checkbox"/> EM <input type="checkbox"/> SS <input type="checkbox"/> FO	Wetland 1A; 0.16 Acres	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<input checked="" type="checkbox"/> EM <input type="checkbox"/> SS <input type="checkbox"/> FO	Wetland 1B; 0.16 Acres	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0.080	0.0 Excavation	
<input checked="" type="checkbox"/> EM <input type="checkbox"/> SS <input type="checkbox"/> FO	Wetland 1C; 0.41 Acres	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0.047	25.5	
<input checked="" type="checkbox"/> EM <input type="checkbox"/> SS <input type="checkbox"/> FO	Wetland 1D; 0.320 Acres	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0.082	88.0	
<input checked="" type="checkbox"/> EM <input type="checkbox"/> SS <input type="checkbox"/> FO	Wetland 1E; 0.240 Acres	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0.017	191.8	
<input type="checkbox"/> EM <input type="checkbox"/> SS <input checked="" type="checkbox"/> FO	Wetland 1F; 0.190 Acres	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0.043	67.2	
Describe the type and composition of fill material to be placed in wetlands on the project site: clean earthen fill material will be used to fill the wetlands					
Describe the type and composition and quantity (<i>cubic yards</i>) of material proposed to be dredged or excavated from wetlands on the project site: Two wetlands will be cut rather than filled. The cut is to develop swales adjacent to the trail.					

B. Isolated Wetlands (Existing Conditions)			Isolated Wetlands (Proposed Impacts)			
Wetland Class	Type	Size of wetland (<i>acreage</i>)	To be Impacted?	Acreage	Fill quantity (<i>cys</i>)	ATF
<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input checked="" type="checkbox"/> NF <input type="checkbox"/> F	Wetland 2; 0.003	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0.002	3.2 cyds	
<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input checked="" type="checkbox"/> NF <input type="checkbox"/> F	Wetland 3; 0.020	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	<input checked="" type="checkbox"/> NF <input type="checkbox"/> F	Wetland 4; 0.070	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0.054	12.1 cyds	
<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	<input checked="" type="checkbox"/> NF <input type="checkbox"/> F	Wetland 5; 0.020	<input type="checkbox"/> Yes <input type="checkbox"/> No	0.001	1.2 cyds	
<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> NF <input checked="" type="checkbox"/> F	Wetland 6; 0.240	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input checked="" type="checkbox"/> NF <input type="checkbox"/> F	Wetland 8;	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Describe the type and composition of fill material to be placed in isolated wetlands on the project site: Clean earthen fill will be used to fill the wetlands for trail development.						
Describe the type and composition and quantity (<i>cubic yards</i>) of material proposed to be dredged or excavated from isolated wetlands on the project site: N/A						

C. Bridges and Stream Crossings - provide the following information for EACH structure (Use additional sheet(s) if required.)

Stream name
N/A

Description of impacts

Length of upstream bank impacts: Left side: Right side:

Length of downstream bank impacts: Left side: Right side:

Bank protection fill placed below the Ordinary High Water Mark: Volume per running foot:

Bank protection fill placed below the Ordinary High Water Mark: Area of coverage:

D. Bank Stabilization – provide the following information for EACH segment (Use additional sheet(s) if required.)

Water body name

N/A

Description of impacts

Length of shoreline or bank protection

Volume (*cubic yards*) of bank protection fill placed below the Ordinary High Water Mark per running footArea (*square feet*) of bank protection fill placed below the Ordinary High Water Mark**E. Stream Relocation**

Water body name

N/A

Description of impacts

Length of existing channel to be relocated (*linear feet*)Length of new channel to be constructed (*linear feet*)

Existing channel to be backfilled?

☐ Yes ☐ No

Type of relocation

☐ Piping ☐ Open ☐ Channel ☐ Other: _____Type of fill and volume (*cubic yards*)**F. Open Water Fill**

Water body name

N/A

Description of impacts

Area of water body to be filled (*acres*)Type of fill and volume (*cubic yards*)

MARQUETTE GREENWAY TRAIL PROJECT

4. PROJECT PURPOSE AND DESCRIPTION

The purpose of the project is to develop a paved trail through the Town of Burns Harbor as part of the Marquette Greenway Trail. The trail will be accessible from a parking lot at the west end of Navajo Trail. Eventually, the trail will continue to the east into the Town of Porter and west into the City of Portage. The project is being let in three phases. Phase 3 will begin construction on July 1, 2020. Phase 1 will be completed after, while Phase 2, the final phase will be completed by September, 2022.

Several communities in Porter County are working to construct a portion of the Marquette Greenway Trail, a bike and pedestrian path along the south shore of Lake Michigan. When complete, the 58 mile trail will run from Chicago, Illinois to New Buffalo, Michigan. Burns Harbor has dedicated the funding to design and build a three mile portion of the trail as it runs through the town. The trail route has been designed to minimize impacts to wetlands and high quality plant communities. The trail begins at the west end of Beam Street, runs for about 1 mile through the Indiana Dunes National Park (IDNP) through Mnoke Prairie, down a forested hillslope to the floodplain of the East Branch of the Little Calumet River, under a railroad bridge, and back up to the top of the bluff again. After a mile the trail leaves NPS land and runs through old field and degraded flatwoods forest to end at the western limits of Burns Harbor. The trail surface will be a combination of boardwalk and asphalt trail. The trail through the floodway will be boardwalk raised approximately 4 feet off the ground surface to be above the 100 year flood elevation. The trail through Mnoke Prairie will be a fireproof, raised concrete boardwalk. Most of the remainder will be paved trail on grade. The trail will require impacts to 0.96 acres of jurisdictional wetland and 0.16 acres of isolated wetland for construction of the trail. A further 0.51 acres of jurisdictional wetland and 0.02 acres of isolated wetland will be crossed with a raised boardwalk with no permanent wetland impacts. See Appendix C for photos of individual impacts.

TRAIL SURFACE AND CONSTRUCTION

The trail surface will be either paved trail on grade or a raised boardwalk. The entire length of trail through the floodplain of the East Branch of the Little Calumet River will be boardwalk. The section through the wet prairie/emergent wetland in Mnoke Prairie will be a concrete boardwalk so that it's fireproof. It will be a raised boardwalk through the wetland portions of the prairie as wetland restoration is planned within the prairie and future inundation levels are not precisely known.

The entire trail will be an Americans with Disabilities Act (ADA) compliant trail approximately 12 feet wide. The raised boardwalk sections will be supported by 3 inch wide helical piers. The paved trail will have a compacted soil base chemically modified with lime or cement to create a solid base. Within Mnoke Prairie and NPS land, the base will be crushed stone. The final trail surface will be asphalt. The trail crossings will have culverts where appropriate to allow water to continue to flow through the area. The trail will have earthen shoulders seeded with an INDOT seed mix or a native seed mix within the IDNP.

It was not possible to use boardwalk through every wetland crossing because of restrictions on elevation and grade with an ADA compliant trail. The raised boardwalks are at minimum 18" tall which would require a 150 foot long approach and return which would then widen the overall impacts.

MARQUETTE GREENWAY TRAIL PROJECT

The U.S. Fish and Wildlife Service said that the federally listed northern long eared bat and Indiana bat are known within the IDNP and surveys were not necessary. So tree clearing was completed prior to March 31, 2020 for the portions of the trail which will be constructed in 2020 (Phase 3).

The trail will be constructed in three phases: the western phase between State Road 149 and the west end of the project will be constructed first in 2020. Phase 1, located mainly within the IDNP, will be let in January of 2021. The final phase, Phase 2 in the center of the trail project area, will be let in spring 2021.

WETLAND IMPACTS

TABLE 1. JURISDICTIONAL WETLAND IMPACTS. WETLAND IMPACTS WERE NUMBERED FROM WEST TO EAST ACROSS THE LENGTH OF THE TRAIL.

Wetland Name	Type (Cowardin)	Wetland Community	Total Wetland Acreage	Impact #	Impact Acreage	Boardwalk or Permanent	Cubic Yards of Fill
Wetland 1H	PFO1C	Forested	0.200	1	0.019	Permanent	21.4
Wetland 1G	PFO1C	Forested	0.660	6	0.095	Permanent	130.3
Wetland 1F	PFO1C	Forested	0.190	7	0.043	Permanent	67.2
Wetland 1E	PEMC	Emergent	0.24	8	0.017	Permanent	191.8
Wetland 1D	PEMC	Emergent	0.32	10	0.082	Permanent	88
Wetland 1C	PEMC	Emergent	0.41	12	0.047	Permanent	25.5
Wetland 1B	PEMC	Emergent	0.16	13	0.08	Permanent	0
Wetland 10	PFO1C	Forested	0.65	14	0.011	Permanent	19.8
Wetland 9	PEM1C	Emergent	0.43	15	0.034	Permanent	55.3
Wetland 9	PEM1C	Emergent	0.43	16	0.051	Permanent	104
Wetland 1	PFO1C	Forested	133.70	17	0.105	Permanent	130.4
Wetland 1	PFO1C	Forested	133.70	18	0.03	Permanent	71.8
Wetland 7	PFO1C	Forested	2.88	19	0.017	Permanent	4.7
Wetland 7	PFO1C	Forested	2.88	20	0.072	Permanent	237.9
Wetland 7	PFO1C	Forested	2.88	21	0.018	Permanent	8.3
Wetland 7	PFO1C	Forested	2.88	22	0.09	Permanent	94.5
Wetland 1	PFO1C	Forested	133.70	25	0.081	Permanent	94.5
Wetland 1	PFO1C	Forested	133.70	26	0.054	Permanent	0
Wetland 1	PFO1C	Forested	133.70	27	0.008	Permanent	18.1
Wetland 1	PFO1C	Forested	133.70	28	0.004	Permanent	0.1
Wetland 1	PFO1C	Forested	133.70	29	0.191	Boardwalk	0

MARQUETTE GREENWAY TRAIL PROJECT

Wetland Name	Type (Cowardin)	Wetland Community	Total Wetland Acreage	Impact #	Impact Acreage	Boardwalk or Permanent	Cubic Yards of Fill
Wetland 1	PF01C	Forested	133.70	30	0.265	Boardwalk	0
Wetland 1A	PEMC	Emergent	0.78	32	0.056	Boardwalk	0

TABLE 2. SUMMARY OF JURISDICTIONAL WETLAND IMPACTS

Trail Type	Total Impact	Forested	Emergent	Cubic Yards of Fill
Boardwalk	0.51	0.46	0.06	-
Paved Trail	0.96	0.65	0.31	1,363.6

TABLE 3. ISOLATED WETLAND IMPACTS. WETLAND IMPACTS WERE NUMBERED FROM WEST TO EAST ACROSS THE LENGTH OF THE TRAIL.

Wetland Name	Type (Cowardin)	Wetland Community	Total Wetland Acreage	Impact #	Impact Acreage	Boardwalk or Permanent	Wetland Class	Cubic Yards of Fill
Wetland 21	PF01C	Forested	0.040	2	0.002	Permanent	2	23.3
Wetland 20	PF01C	Forested	0.060	3	0.003	Boardwalk	2	0
Wetland 19	PF01C	Forested	0.010	4	0.012	Boardwalk	2	0
Wetland 18	PF01C	Forested	0.240	5	0.083	Permanent	2	17.6
Wetland 17	PEM1C	Emergent	0.350	9	0.016	Permanent	1	4.1
Wetland 16	PEM1C	Emergent	0.140	11	0.001	Permanent	1	0.03
Wetland 5	PEM1C	Emergent	0.020	23	0.001	Permanent	2	1.2
Wetland 4	PEM1C	Emergent	0.070	24	0.054	Permanent	2	12.1
Wetland 2	PEM1C	Emergent	0.003	31	0.002	Permanent	1	3.23

TABLE 4. SUMMARY OF ISOLATED WETLAND IMPACTS

Trail Type	Total Impact	Forested	Emergent	Cubic Yards of Fill
Boardwalk	0.02	0.02	0	-
Paved Trail	0.16	0.09	0.07	61.6

MARQUETTE GREENWAY TRAIL PROJECT

WETLAND COMMUNITIES

There are two wetland community types within the project area: forested and emergent wetland. Forested wetland includes northern swamp forest found on the flat lake plain and floodplain forest adjacent to the East Branch of the Little Calumet River. Emergent wetland includes old field wetlands at the east end of the project area and wet prairie within Mnoke Prairie. The trail was rerouted to avoid the highest quality wet prairie and the trail through the prairie will be a raised boardwalk to avoid impacts. The community type names are based on those used by the Indiana Dunes National Park and specifically listed in *The Special Vegetation of the Indiana Dunes*, a provisional copy provided by Noel Pavlovic, USGS in 2017.

Forested Wetland

Forested wetland includes pin oak flatwoods which here is dominated by pin oak (*Quercus palustris*), silver maple (*Acer saccharinum*), eastern cottonwood (*Populus deltoides*), multiflora rose (*Rosa multiflora*), jumpseed (*Persicaria virginiana*), white panicle American aster (*Symphotrichum lanceolatum*), farewell summer (*Symphotrichum lateriflorum*), and Bluejoint (*Calamagrostis canadensis*). This forested wetland was farmed in the past and has a disturbed understory dominated by invasive shrubs and vines (the above as well as Japanese barberry, autumn olive, Asian bittersweet, European privet, and honeysuckle). A floristic quality assessment of the pin oak flatwoods forest identified 73 species with an average coefficient (C-value) of conservatism of 2.78 and a floristic quality index (FQI) of 26.89 (see Appendix G).



Photo 1. A typical flatwoods forest wetland, Wetland 1H, at the west end of the project area. The trail will cross through this wetland (Impact 1) facing east, May 25, 2018.

MARQUETTE GREENWAY TRAIL PROJECT



Photo 2. A typical view of forested wetland near the east end of the project area in Wetland 7 (facing N, July 24, 2018). This was located within a tree line with young sapling age trees.



Photo 3. Typical pin oak flatwoods at the eastern end of the project area through NPS land. Pin oak dominates here with a sparsely vegetated understory (facing E; October 16, 2019).

MARQUETTE GREENWAY TRAIL PROJECT

The forested wetland community type also includes a small portion of bottomland/floodplain forest adjacent to the East Branch of the Little Calumet River. The forest within this 5 acre area is degraded as it is located adjacent to a railroad bridge which was recently disturbed during reconstruction of the bridge. Dominant species included downy hawthorn (*Crataegus mollis*), green ash (*Fraxinus pennsylvanica*), reed canary grass (*Phalaris arundinacea*), Canadian clearweed (*Pilea pumila*), green-head coneflower (*Rudbeckia laciniata*), late goldenrod (*Solidago gigantea*), and farewell summer (*Symphytotrichum lateriflorum*). A floristic quality assessment of the floodplain forest identified 59 species with an average coefficient (C-value) of conservatism of 2.95 and a floristic quality index (FQI) of 22.65 (Appendix F).



Photo 4. Typical view of the floodplain south of the railroad bridge. In this area *Symphytotrichum lateriflorum* dominates the understory. The canopy is mostly open because of the loss of ash trees (facing SE; October 16, 2019).

MARQUETTE GREENWAY TRAIL PROJECT

Emergent Wetland

Jurisdictional emergent wetland within the project area is limited to old field wetlands outside of the NPS boundary. These areas are the lowest quality wetland communities on site with very limited species diversity. Almost every wetland within the old fields was dominated by reed canary grass. A floristic quality assessment of the old field wetlands identified 70 species with an average coefficient (C-value) of conservatism of 2.57 and a floristic quality index (FQI) of 21.51 (Appendix F).



Photo 5. Wetland 1D facing east along the edge of the old field/mesophytic forest edge (May 25, 2018). This old field, emergent wetland drains through an adjacent forested drainage way, down to the floodplain of the East Branch of the Little Calumet River. This is typical of the old field wetlands within the project area.

5. AVOIDANCE, MINIMIZATION, AND MITIGATION INFORMATION

Describe all compensatory mitigation required for unavoidable impacts.

Wetlands were identified and delineated within a large 260 acre project area and the preliminary trail route and project limits were adjusted based on where high quality resources or wetlands were identified to minimize impacts to these resources. The trail was originally planned to be routed entirely through NPS land but based on the large amount of wetland resources within the NPS land and the difficulty and expense in repeatedly crossing the Little Calumet River, an alternative route further south was located. Additionally, high quality wetland resources were identified on NPS land so the Town of Burns Harbor acquired land further south of the initial planned route in order to minimize impacts to high quality

MARQUETTE GREENWAY TRAIL PROJECT

resources. The trail route has been designed to minimize impacts to wetlands and high quality plant communities.

The Environmental Assessment Document in Appendix E details the alternative trail routes that were considered including a no action alternative and the reasons the current proposed route is the preferred alternative.

The Marquette Greenway Trail project will impact 0.96 acres of jurisdictional wetland. The Town of Burns Harbor proposes to mitigate for the impacts by restoring wetland within Mnoke Prairie on NPS land. Wetland restoration is proposed at the prairie due to several limiting factors: (1) the National Park Service requires that any wetland impacts within the national park be mitigated within the national park and (2) the Town of Burns Harbor is funding the project and they will only fund restoration work within their town limits.

The trail will impact wetland within the national park as well as outside of the park on private land. It does not make sense to develop two separate wetland mitigation sites so one site is proposed. Then, the Town of Burns Harbor is relatively small so that restoration opportunities that are both within IDNP and the Town limits mitigation to either restoration within the floodplain of the Little Calumet River or within the west half of Mnoke Prairie (the prairie is about 185 acres divided between the Town of Porter and Burns Harbor). Wetland creation is not an option within the floodplain because it's already wetland but invasive control and/or enhancement is an option. The other option is to restore hydrology at Mnoke Prairie.

The prairie is drained by a series of surface ditches. Soil Solutions, Inc. (SSI) mapped soils on site to determine the limits of hydric soil and completed a wetland delineation within a 15 acre area north of the existing trail project limits. SSI identified two wetlands surrounding the ditches on site (4.09 acres total). Based on soil boring data, limits of hydric soils, and existing wetland limits, we can estimate a potential wetland expansion area.

SSI proposes a series of 1 foot wide keyways placed at strategic locations along the sections of ditch. To build the keyway, a 1 foot wide trench would be excavated perpendicular to the ditch down to the depth of the dense basal till (about 48" down). Compacted clay would be placed in the trench to stop surface flow through the ditch as well as to slow subsurface lateral flow.

The wetland delineation identified 4.09 acres of wetland surrounding the ditches. SSI estimates that restoring hydrology on site will expand the wetlands by at least 3.75 acres on site. The project will impact 0.31 acres of emergent wetland and 0.65 acres of forested wetland. Mitigation will involve creation of emergent wetland rather than forested wetland. Because of this, we propose a 4:1 ratio for forested wetland impacts (see Table 5 below).

MARQUETTE GREENWAY TRAIL PROJECT

TABLE 5. PROPOSED IMPACTS AND MITIGATION RATIOS

	ISOLATED	Emergent	Forested
Impact Total – 0.16 Acres		0.074	0.085
Proposed Mitigation Ratio		1.5:1	4:01
Mitigation Acres Needed		0.11	0.34
	JURISDICTIONAL	Emergent	Forested
Impact Total – 0.96 Acres		0.311	0.647
Proposed Mitigation Ratio		1.5:1	4:01
Mitigation Acres Needed		0.47	2.59
Total Acres Needed		3.05	
Sum of Mitigation Acres Required		3.50	
Estimated Wetland Expansion at Mnoke Prairie		3.75	

Through SSI, the Town of Burns Harbor is in discussions with the IDNP on how mitigation will be completed at Mnoke Prairie. Once details are worked out between both parties and SSI, a complete compensatory mitigation plan will be submitted.

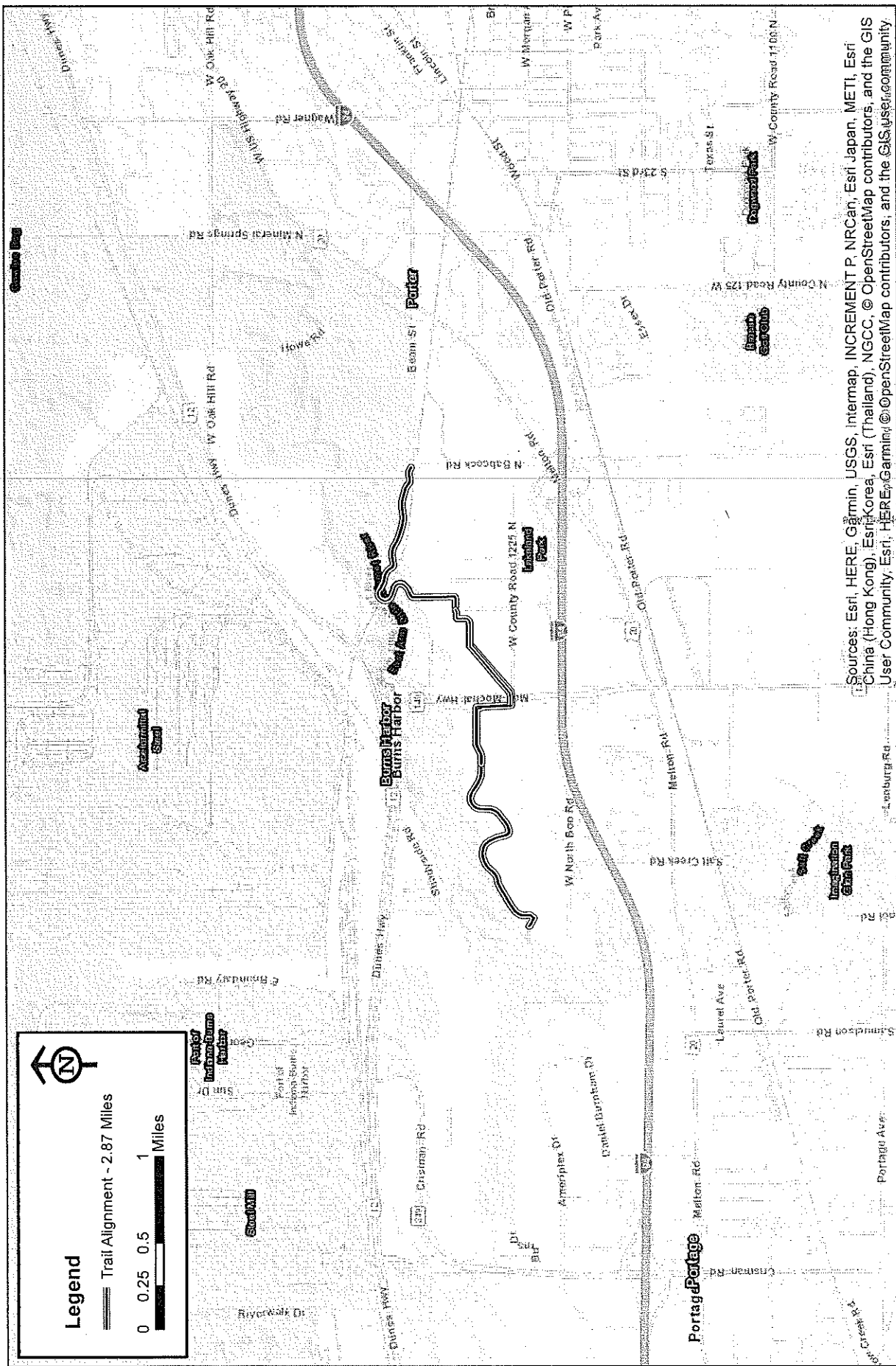
Appendix B: Location Maps and Existing Conditions

Figure 1. Project Limits

Figure 2. Project Limits – 2018 Aerial Photo

Figure 3. Trail and Wetland Overlay

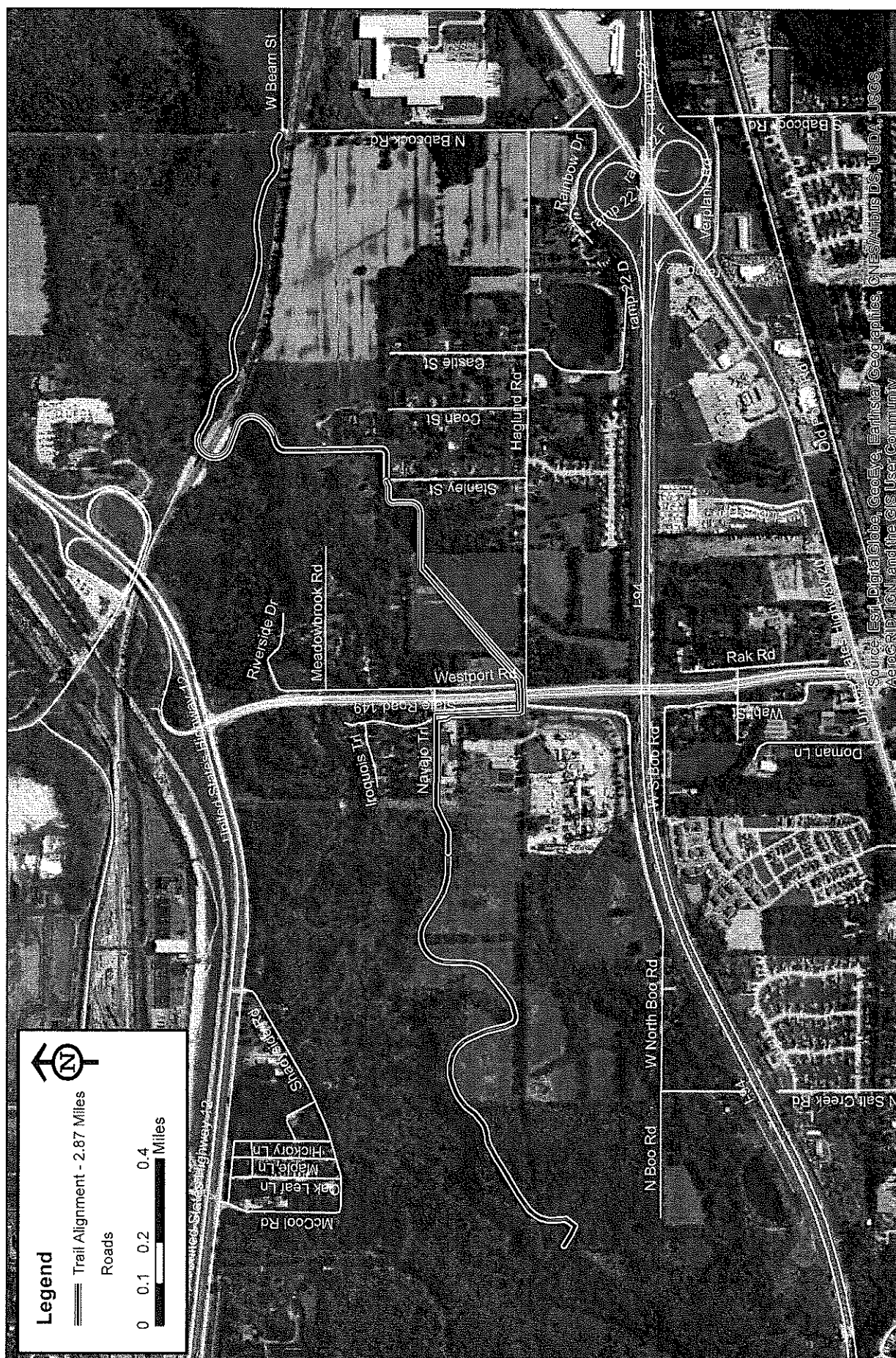
Figure 4. Photo Locations



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community, Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community.

Overview of Trail Route Marquette Greenway Trail Project Burns Harbor, Indiana

	360 INDIANA AVENUE, SUITE B VALPARAISO IN 46383 PHONE: (219) 405-8128 www.soilsolutions-inc.com	SSI# 12-13A(19)P1 Print Date: 5/31/2020 Map by: Lydia Loyd Projection: NAD 1983 HARN StatePlane Indiana West



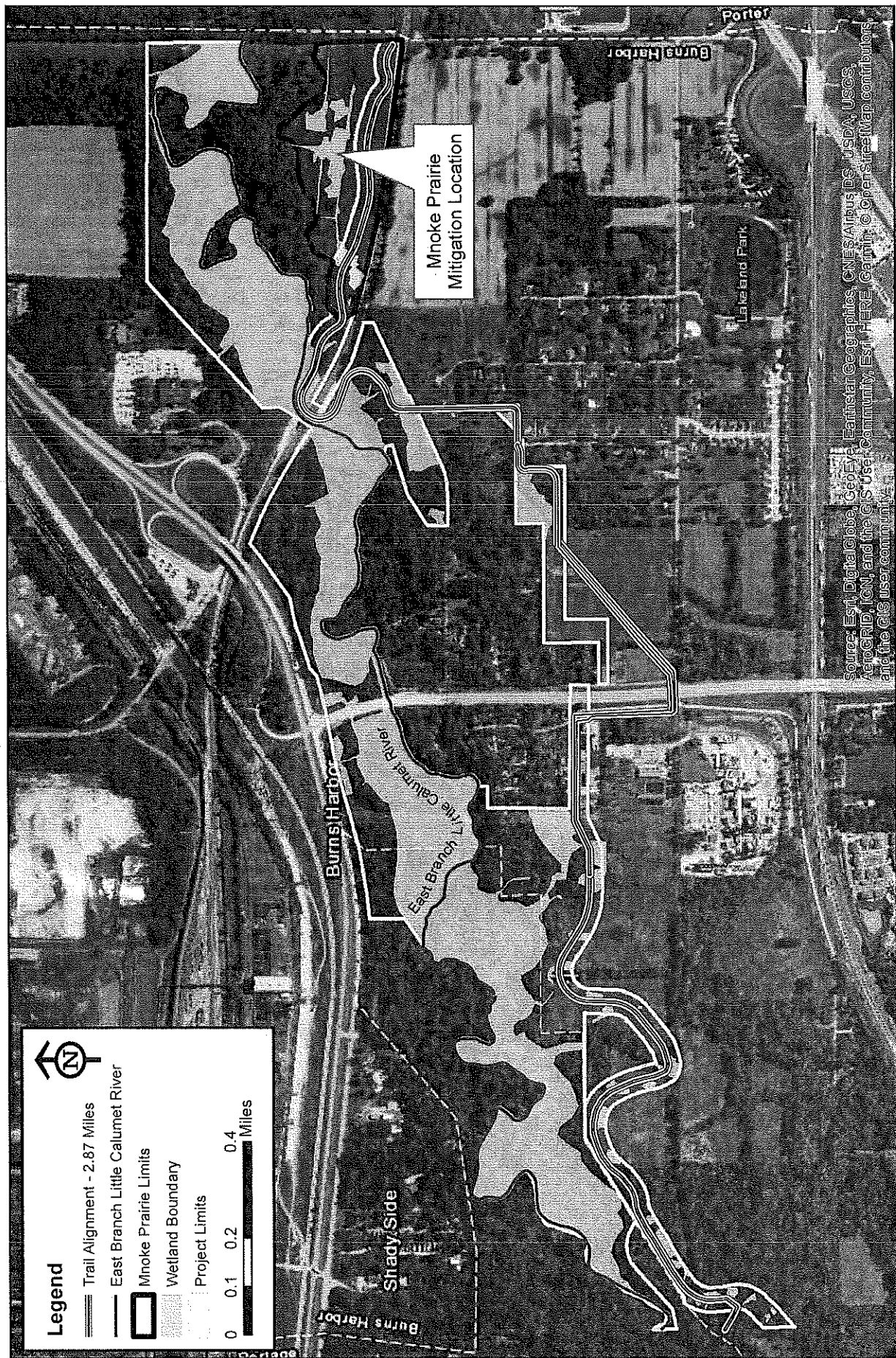
Overview of Trail Route
Marquette Greenway Trail Project
Burns Harbor, Indiana

SSI#: 12-13A(19)P1
Print Date: 5/31/2020

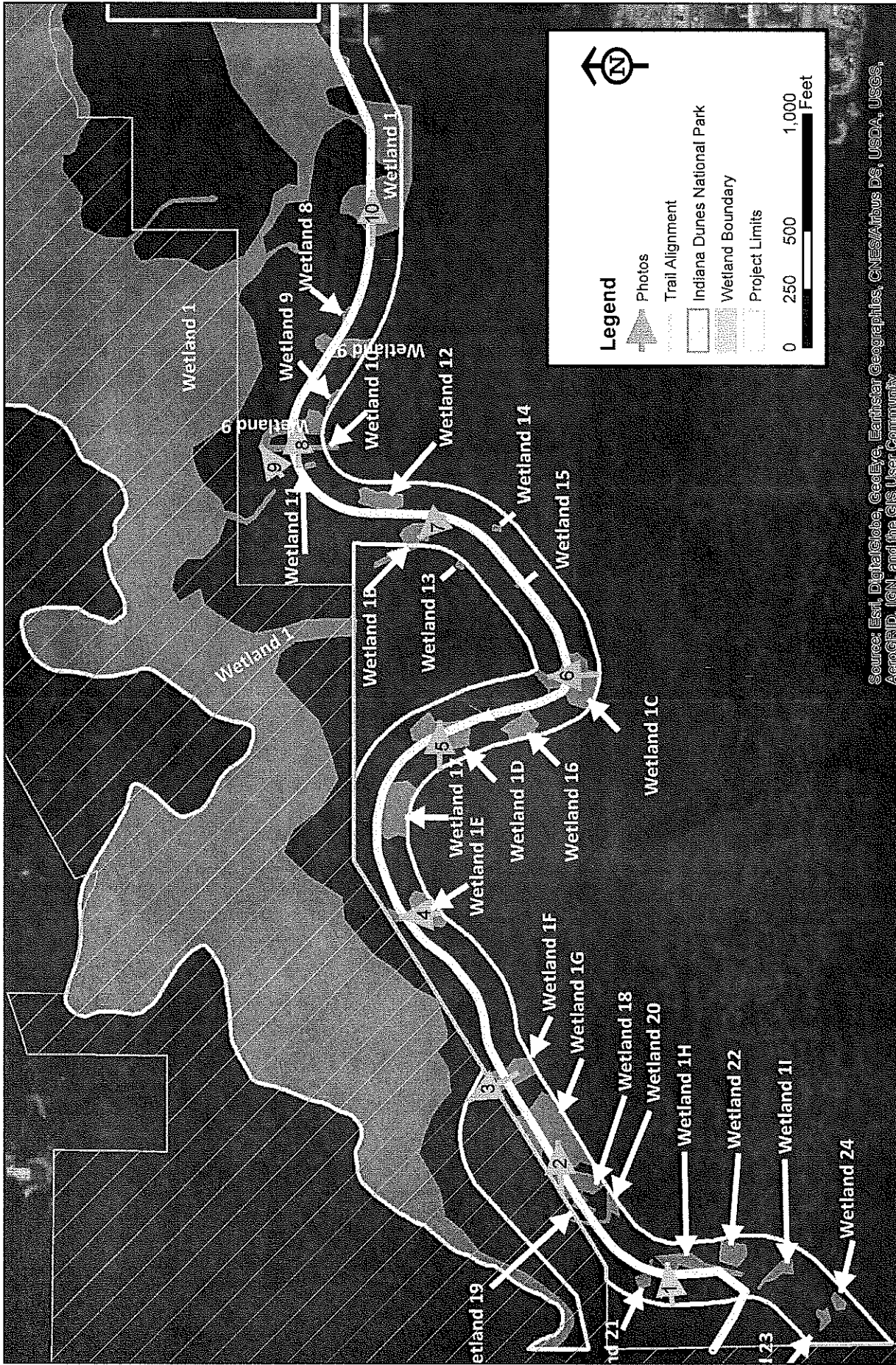
Map by: Lydla Loyd
Projection: NAD 1983 HARN
StatePlane Indiana West

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<p>Trail and Wetland Delineation Overlay</p> <p>Marquette Greenway Trail Project</p> <p>Burns Harbor, Indiana</p>	<p>SS#: 12-13A(19)P-1</p> <p>Print Date: 5/31/2020</p> <p>Map by: Lydia Loyd</p> <p>Projection: NAD 1983 HARN</p> <p>StatePlane Indiana West</p>
<p>Figure 3</p>	<p>360 INDIANA AVENUE, SUITE B</p> <p>VALPARAISO IN 46383</p> <p>PHONE: (219) 405-8128</p> <p>www.solisolutions-inc.com</p>



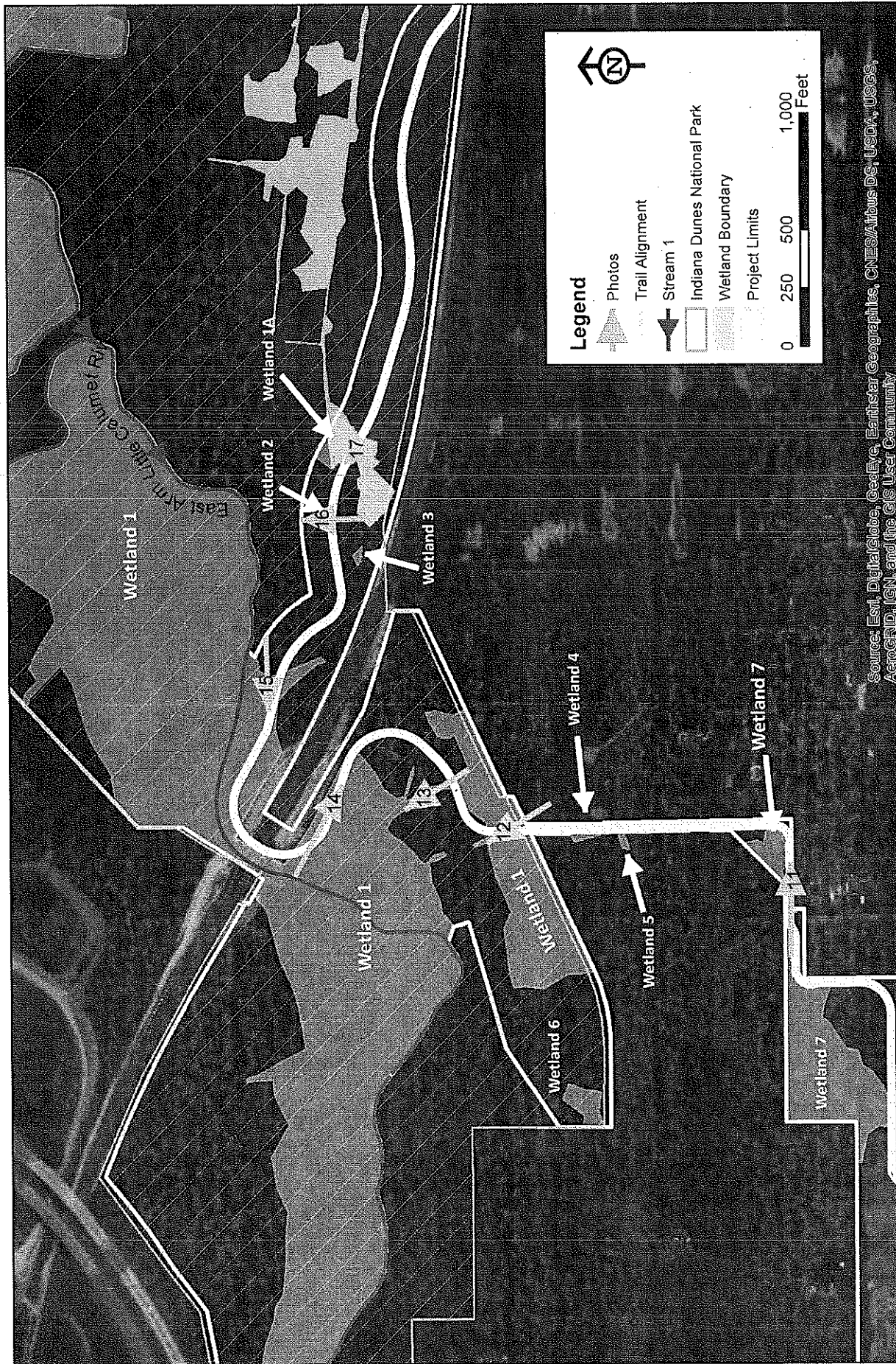
9200 CALUMET AVENUE, SUITE N300
MUNSTER, IN 46321
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DES# 1601147, 1601757
Print Date: 5/31/2020
Map by: Lydia Loyd
Projection: NAD 1983 HARN
StatePlane Indiana West

Photo Location Map **Marquette Greenway Trail Project** **Burns Harbor, Indiana**

Figure 4.1

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Appendix C: Wetland Impact Drawings and Cross Sections

**BURNS HARBOR MARQUETTE GREENWAY TRAIL
WETLANDS EXHIBIT**

AFFECTED WETLAND AREA	
WETLAND No.	AREA (ACRES)
1A (IMPACTED 32)	0.056
2 (IMPACTED 31)	0.002
1 (IMPACTED 30)	0.265
1 (IMPACTED 29)	0.191
1 (IMPACTED 28)	0.004
1 (IMPACTED 27)	0.008
1 (IMPACTED 26)	0.054
1 (IMPACTED 25)	0.081
4 (IMPACTED 24)	0.034
5 (IMPACTED 23)	0.001
7 (IMPACTED 22)	0.090
7 (IMPACTED 21)	0.018
7 (IMPACTED 20)	0.072
7 (IMPACTED 19)	0.017
1 (IMPACTED 18)	0.030
1 (IMPACTED 17)	0.105
9 (IMPACTED 16)	0.061
9 (IMPACTED 15)	0.034
10 (IMPACTED 14)	0.011
18 (IMPACTED 13)	0.080
1C (IMPACTED 12)	0.047
16 (IMPACTED 11)	0.001
1D (IMPACTED 10)	0.092
17 (IMPACTED 9)	0.016
1E (IMPACTED 8)	0.017
1F (IMPACTED 7)	0.043
1G (IMPACTED 6)	0.095
18 (IMPACTED 5)	0.083
19 (IMPACTED 4)	0.012
20 (IMPACTED 3)	0.003
21 (IMPACTED 2)	0.002
1H (IMPACTED 1)	0.019
TOTAL AREAS	1.644
TOTAL "U/O BOARDWALK	1.117

NOTES:

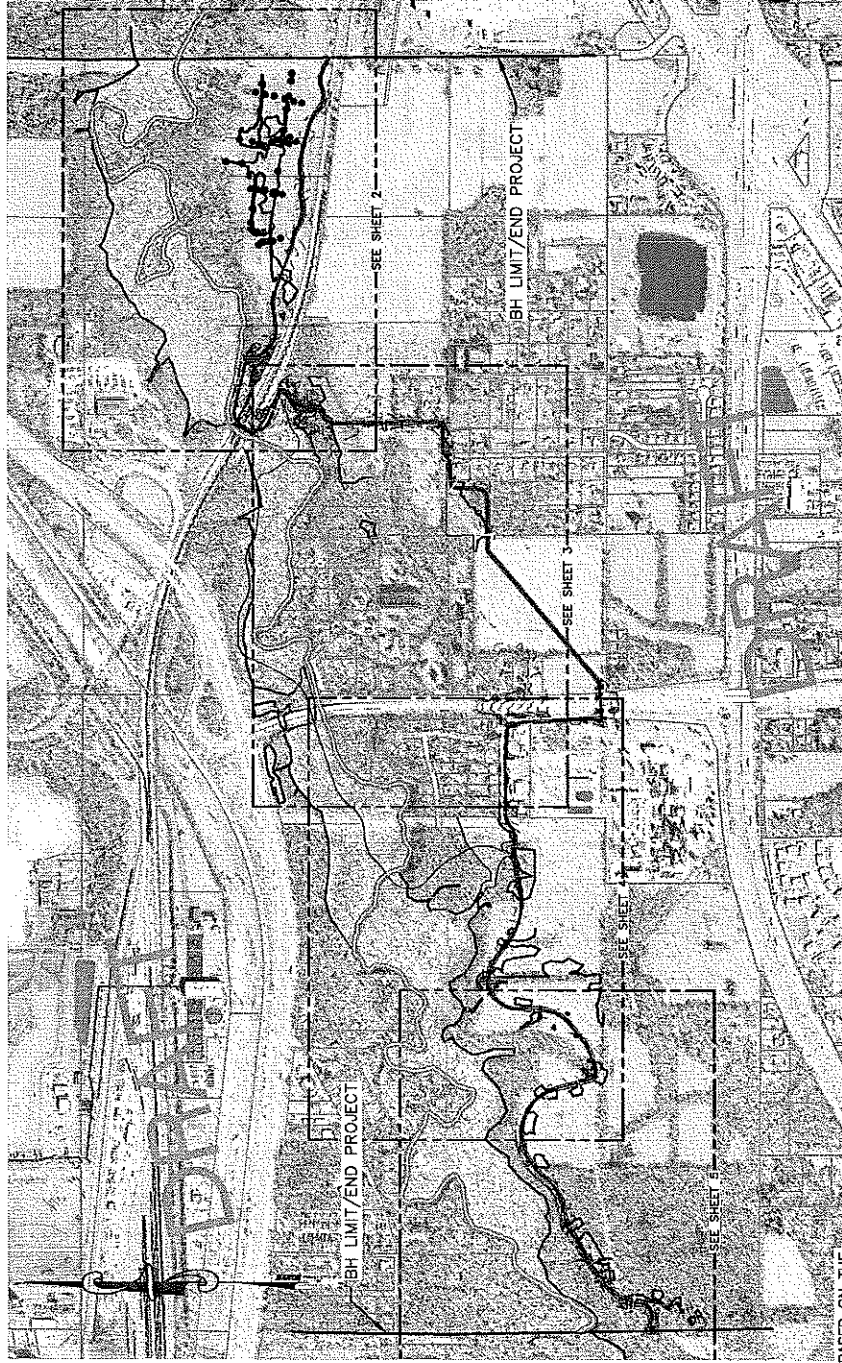
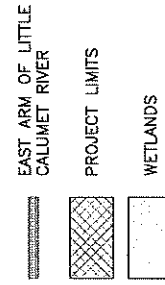
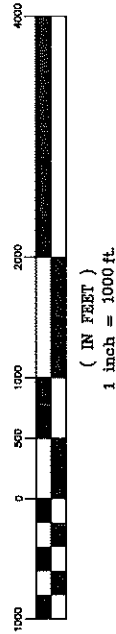
THE BASIS OF BEARING FOR THIS SURVEY WAS BASED ON THE TRIMBLE VRS/GPS NETWORK.

FIELD WORK COMPLETED BETWEEN DEC. 2017 AND MAY 2018

X = WETLAND FLAG LOCATED IN THE FIELD

*THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR A SURVEYOR LOCATION REPORT

GRAPHIC SCALE



OVERALL MAP

GLOBAL
ENGINEERING & LAND SURVEYING, LLC.
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**BH-MARQUETTE GREENWAY TRAIL
WETLANDS EXHIBIT
TOWN OF BURNS HARBOR
1240 NORTH BOO RD.
BURNS HARBOR, IN 46304**

PROJECT NAME:
PROJECT OWNER:

DRAWING DATE: 4/23/20
DRAWING BY: SH

**SHEET
1 OF 5**

BH-MARQUETTE GREENWAY TRAIL
WETLANDS EXHIBIT
TOWN OF BURNS HARBOR
1240 NORTH BOO RD.
BURNS HARBOR, IN 46304

PROJECT
NAME:

DRAWING DATE: 4/23/20
DRAWING BY: SH

**SHEET
2 OF 5**



**BURNS HARBOR MARQUETTE GREENWAY TRAIL
WETLANDS EXHIBIT**

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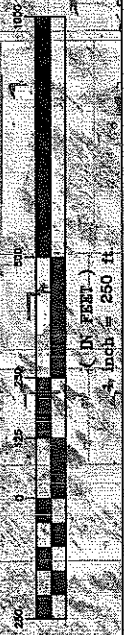
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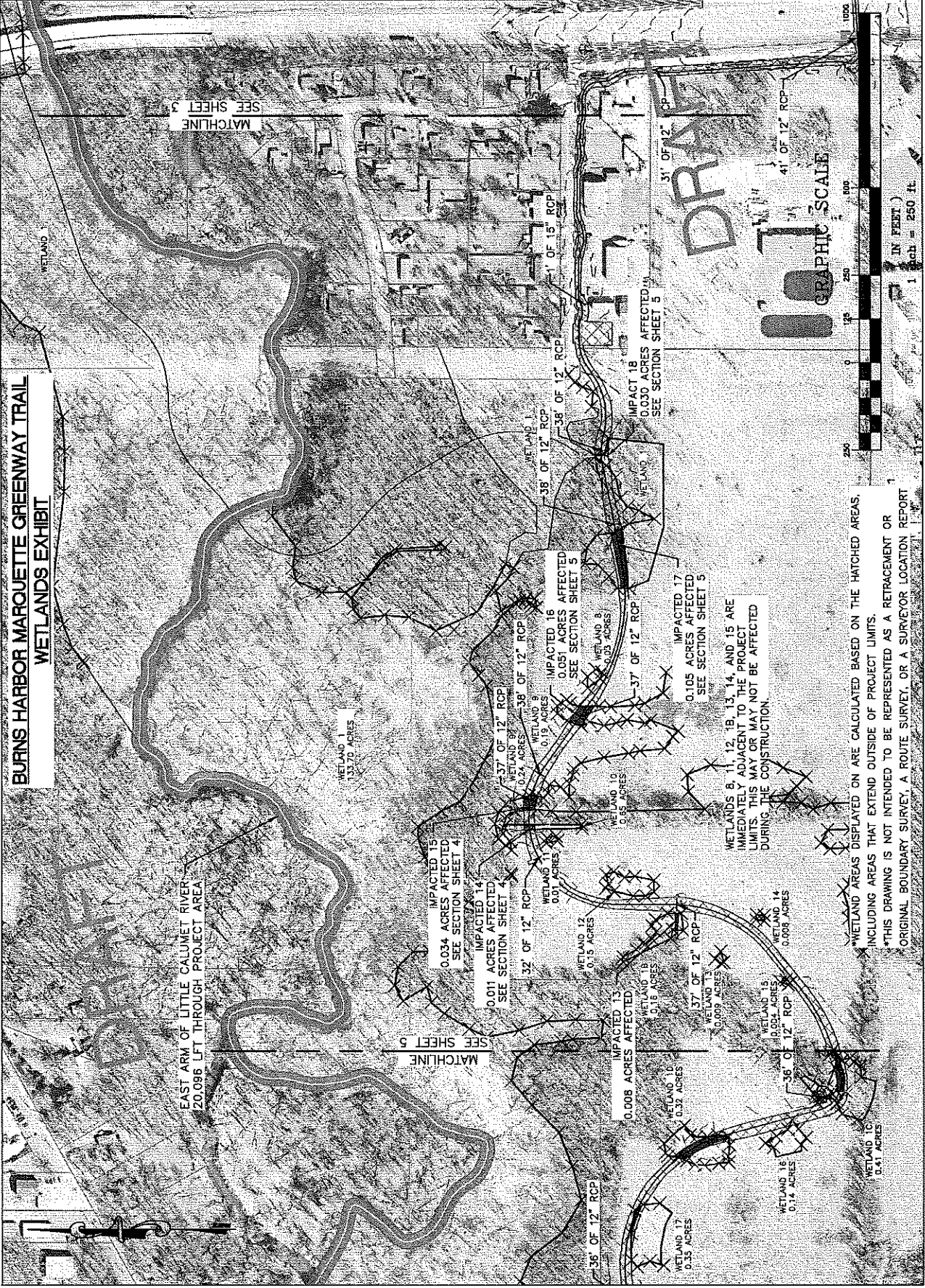
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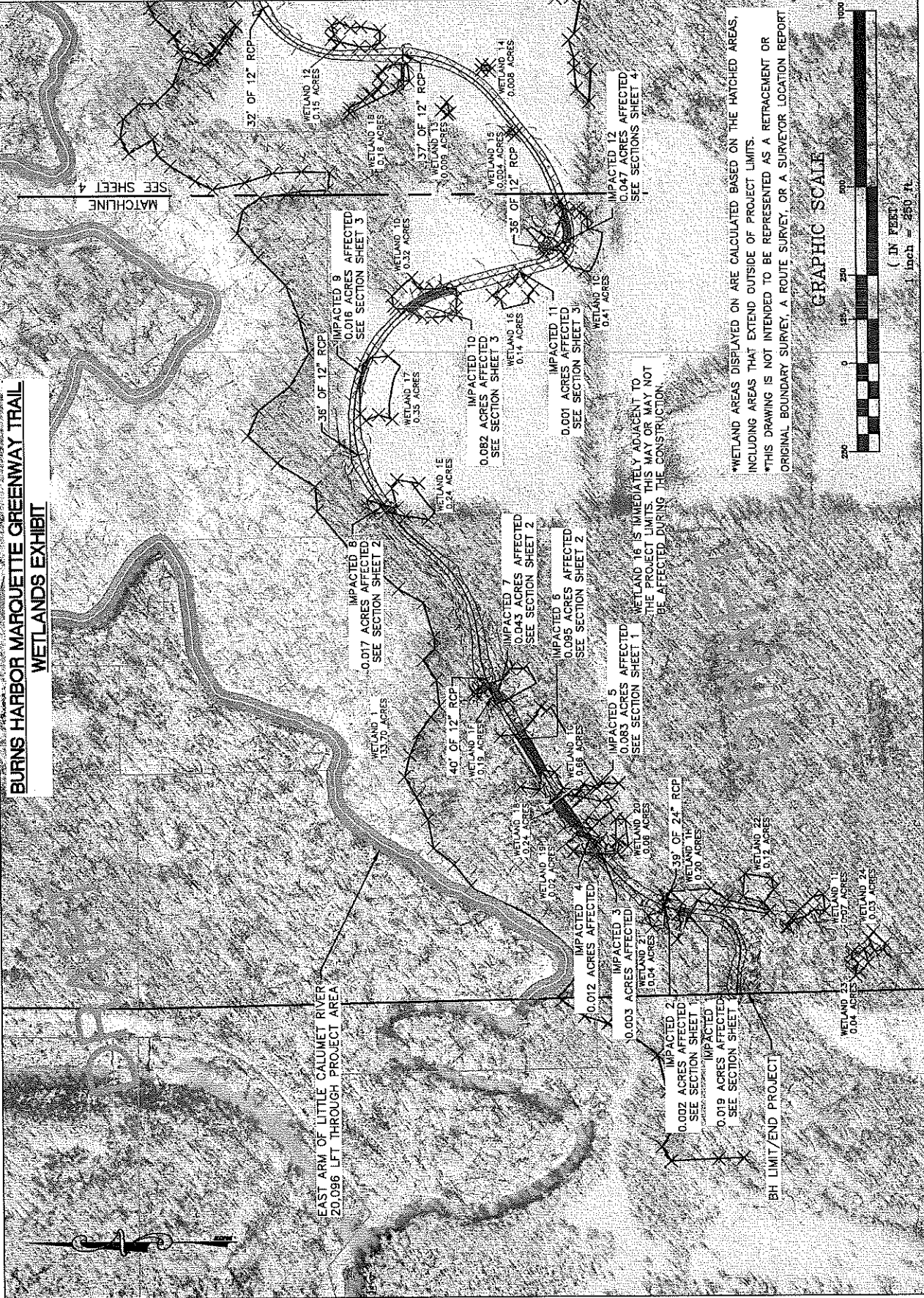


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*THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR A SURVEYOR LOCATION REPORT



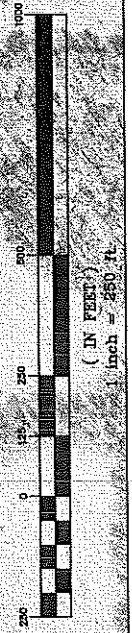
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BURNS HARBOR MARQUETTE GREENWAY TRAIL WETLANDS EXHIBIT



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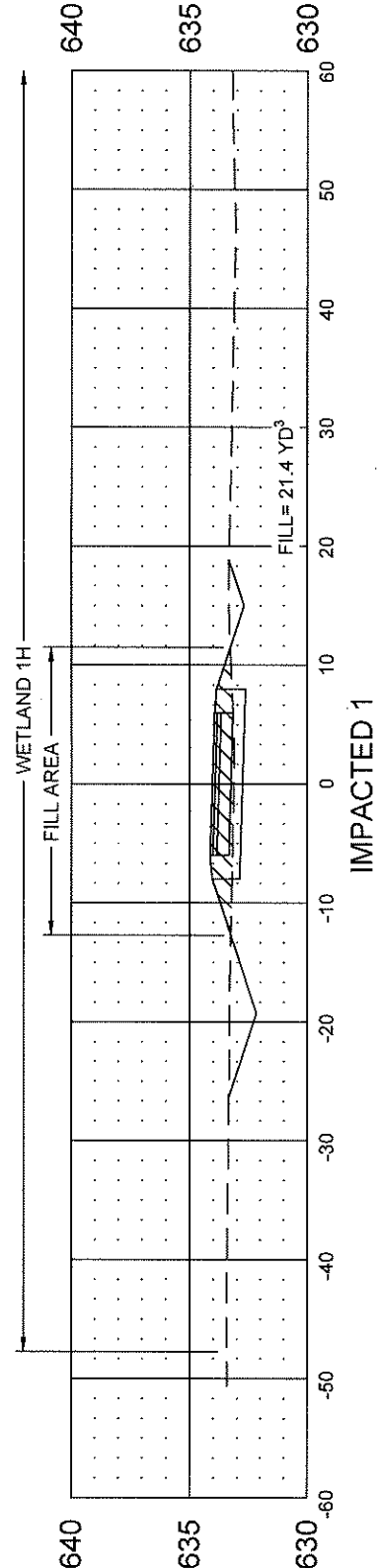
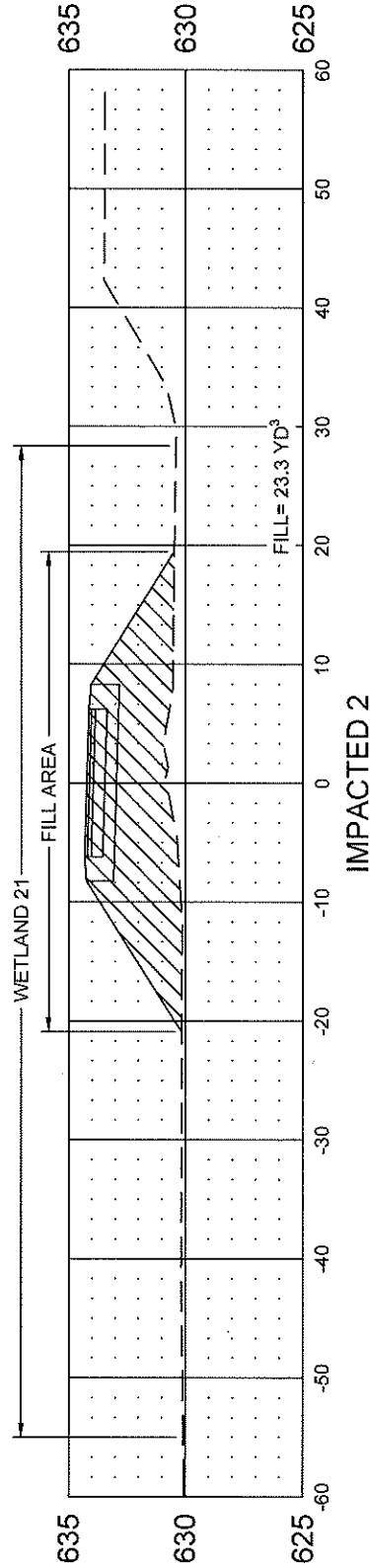
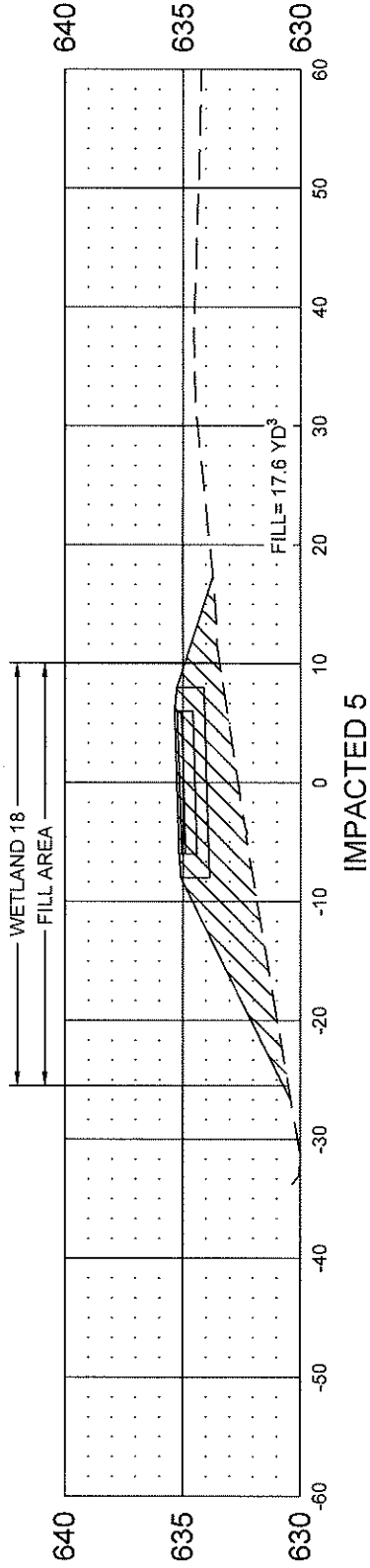
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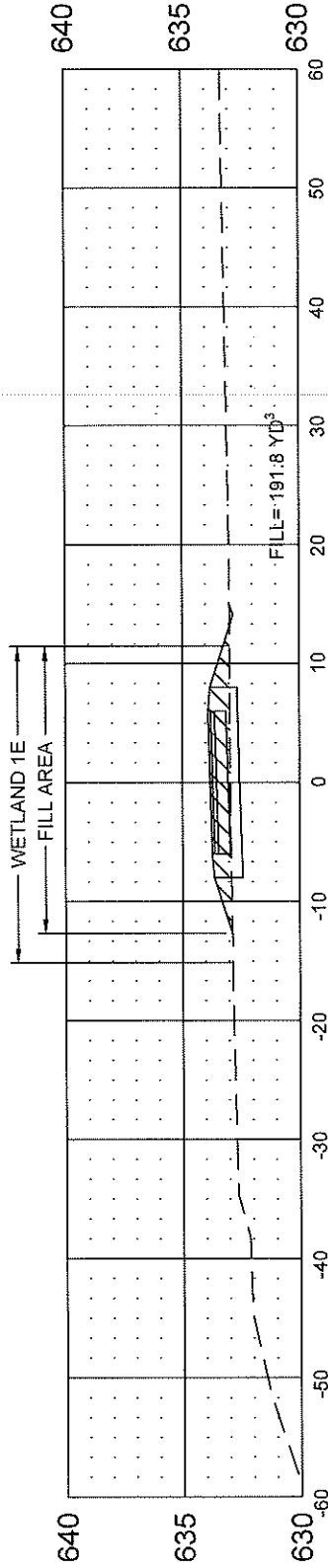


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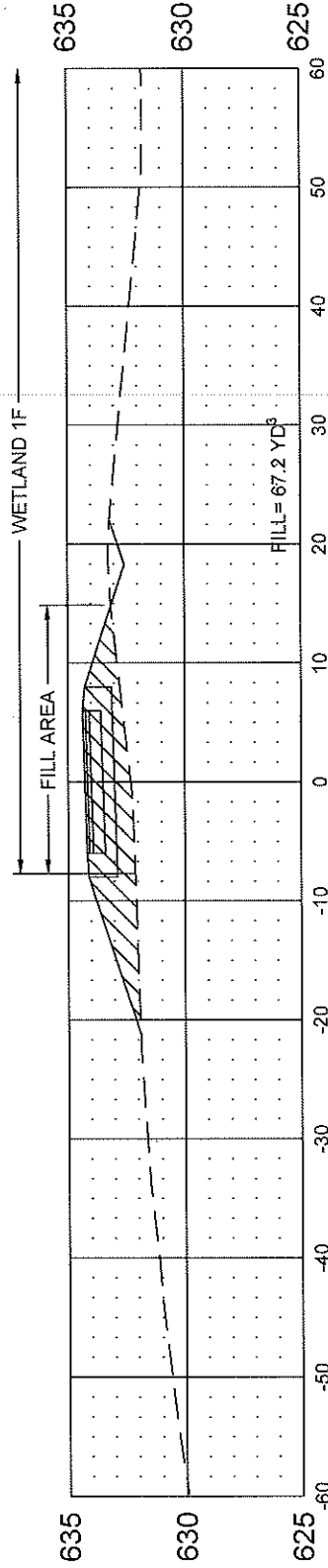
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PROJECT OWNER: TOWN OF BURNS HARBOR
1240 NORTH BOO RD.
BURNS HARBOR, IN 46304

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DRAWING BY: SH
SHEET 5 OF 5

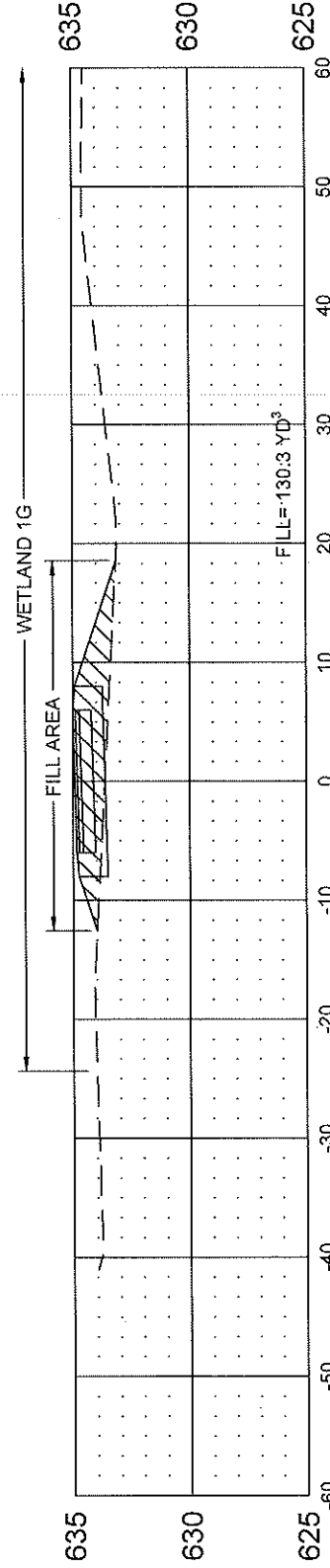




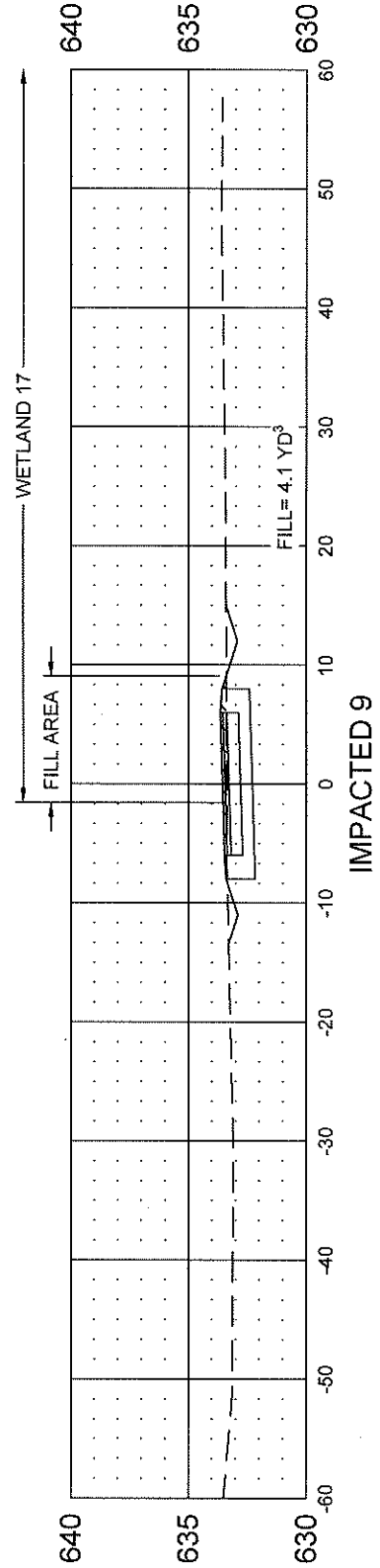
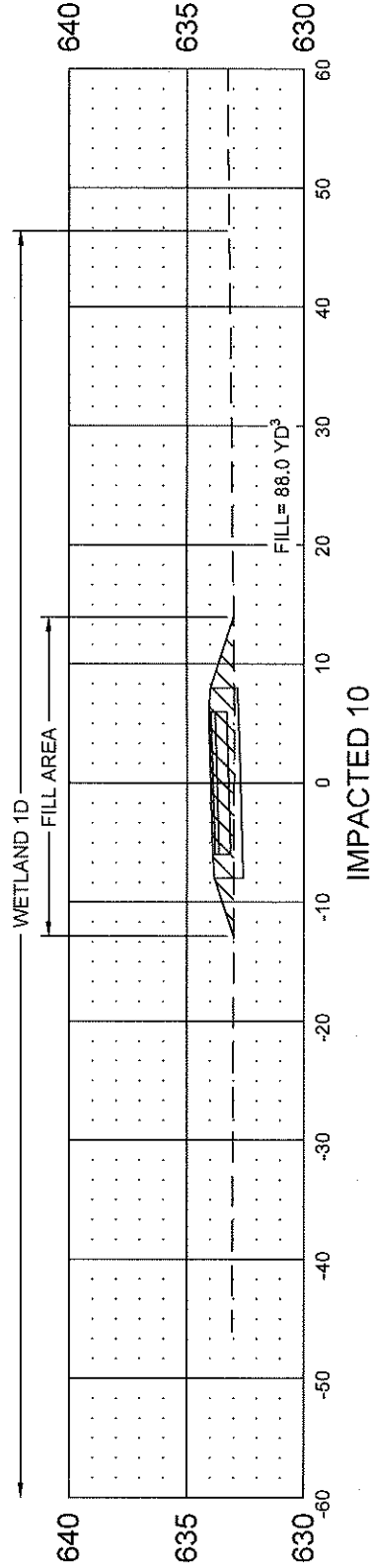
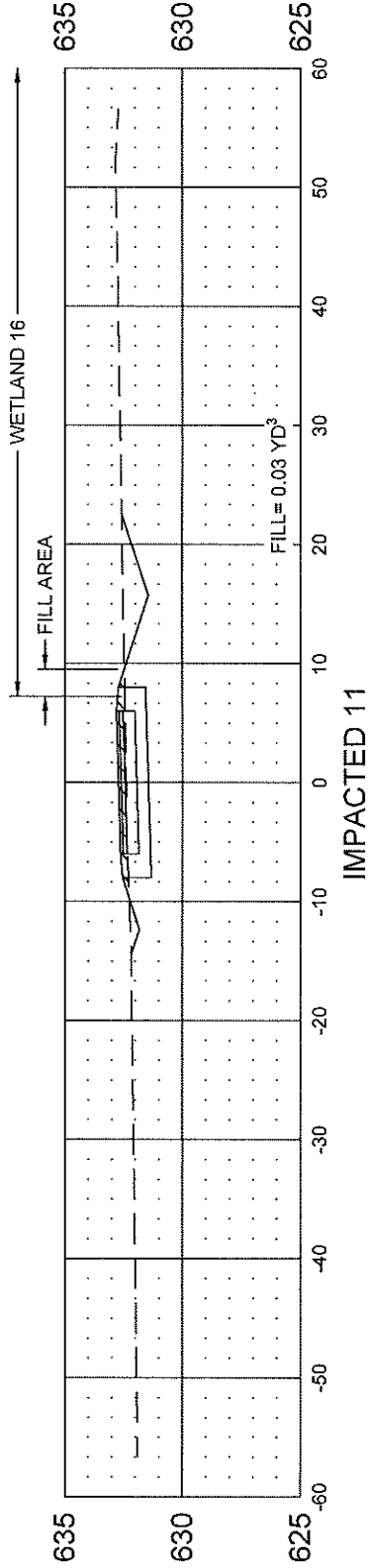
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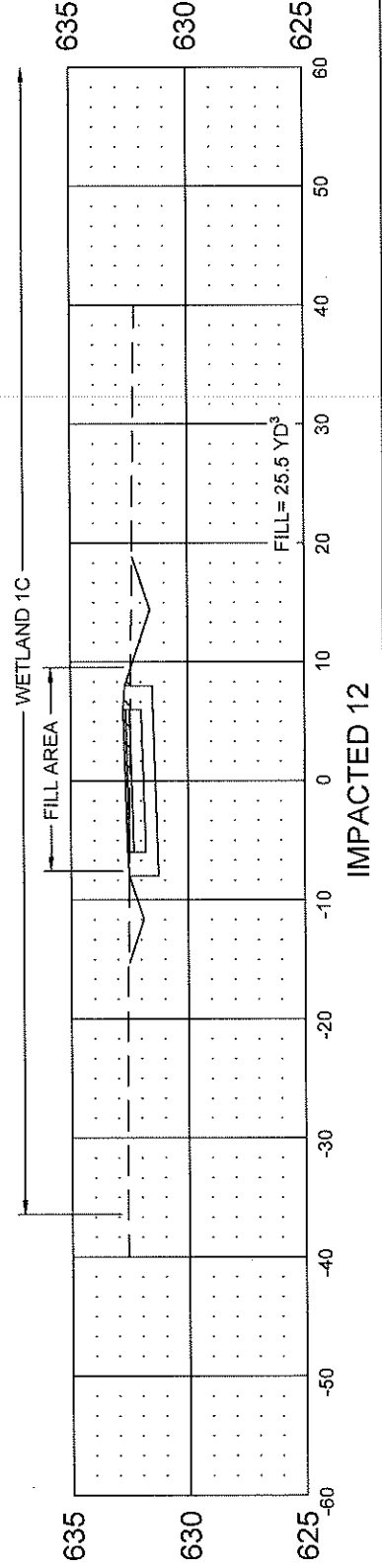
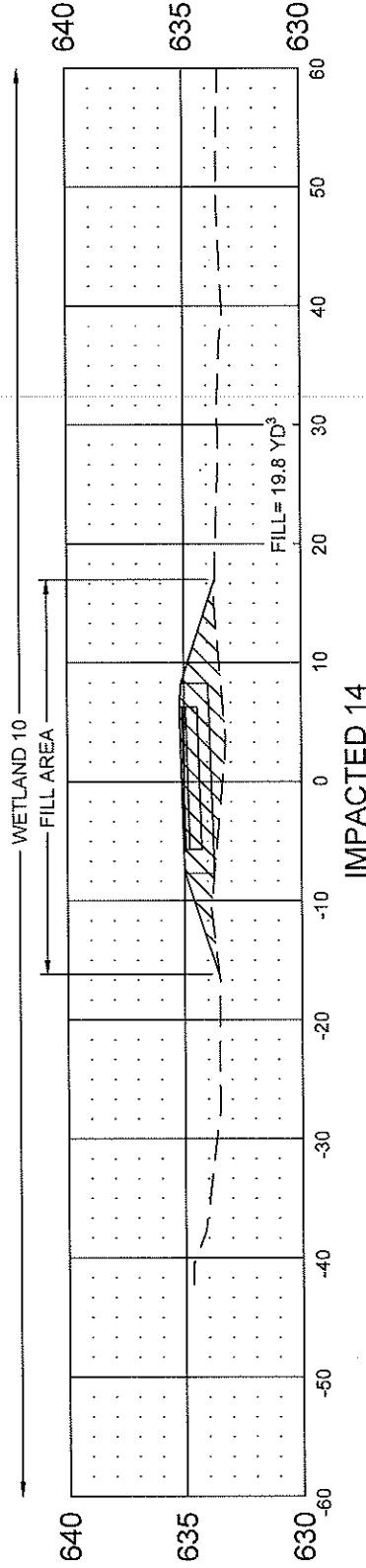
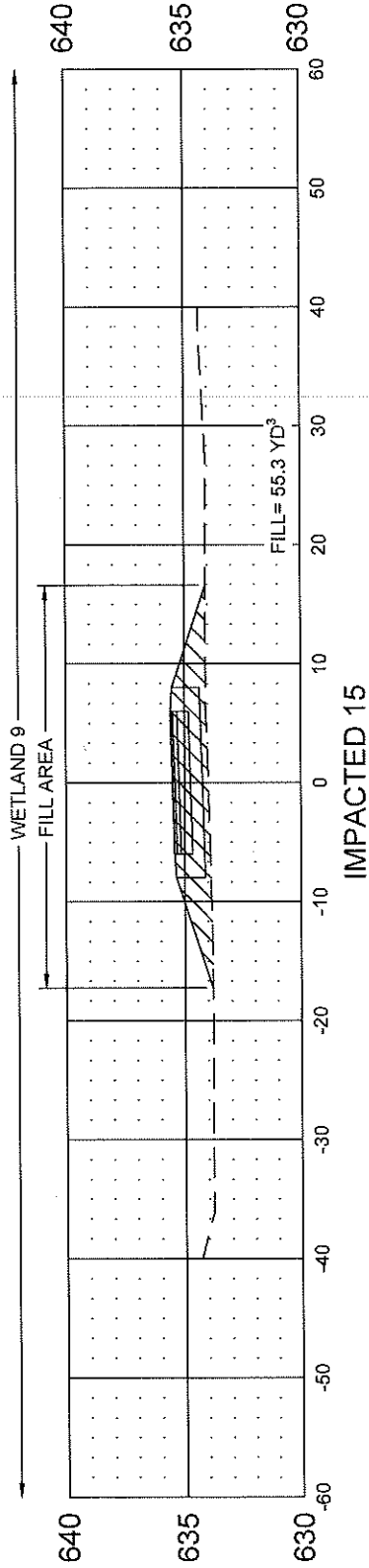


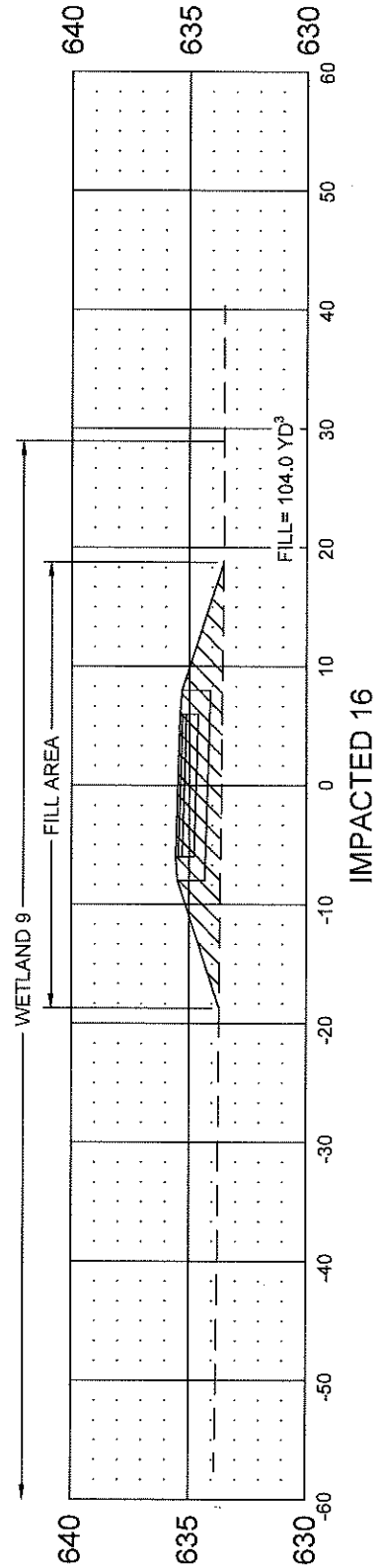
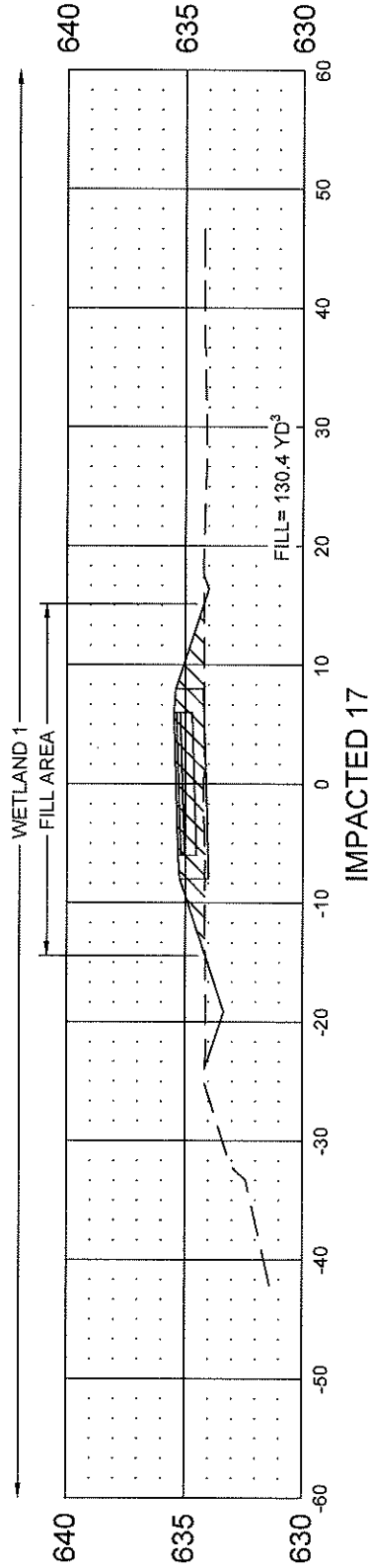
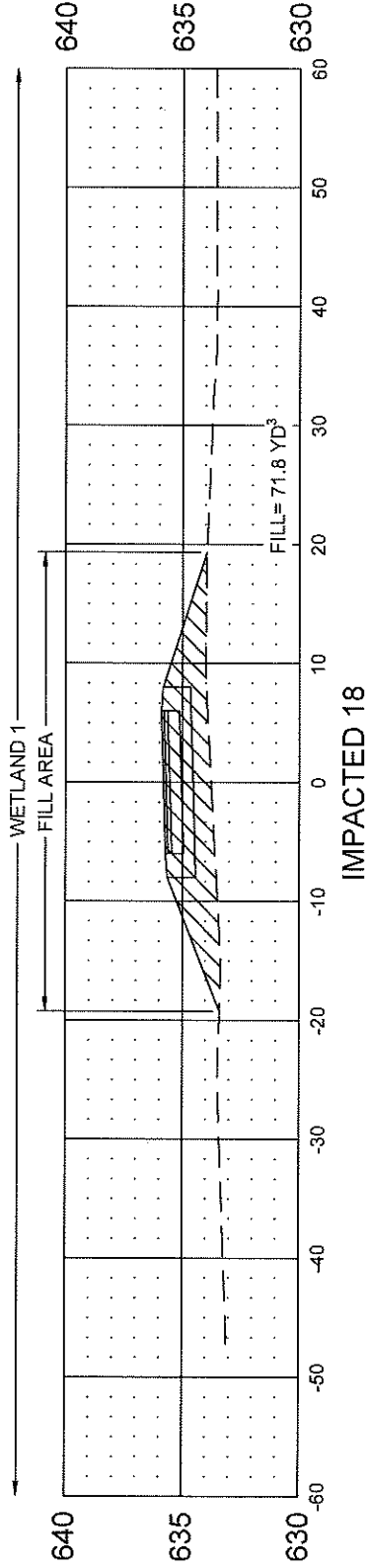
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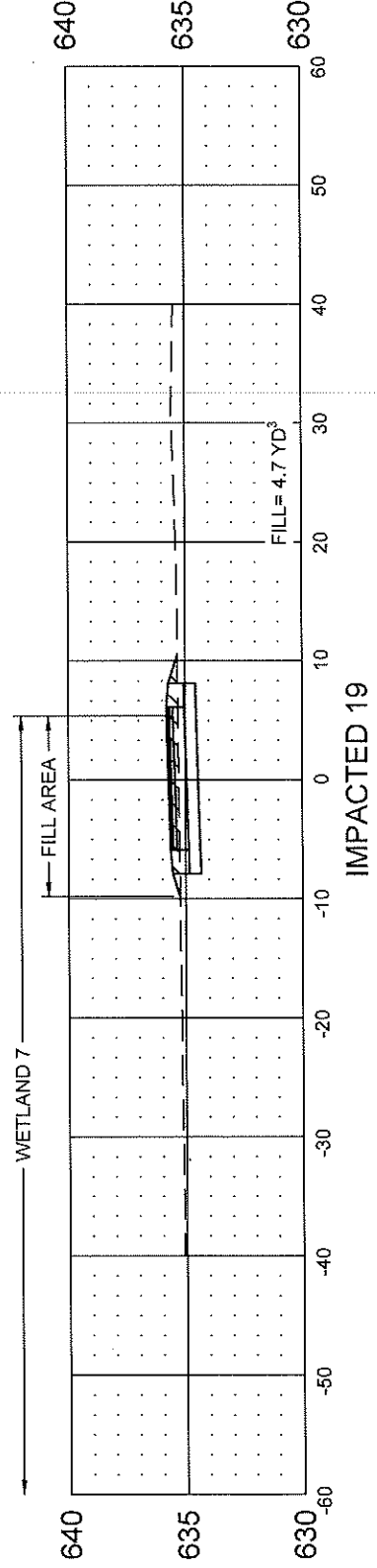
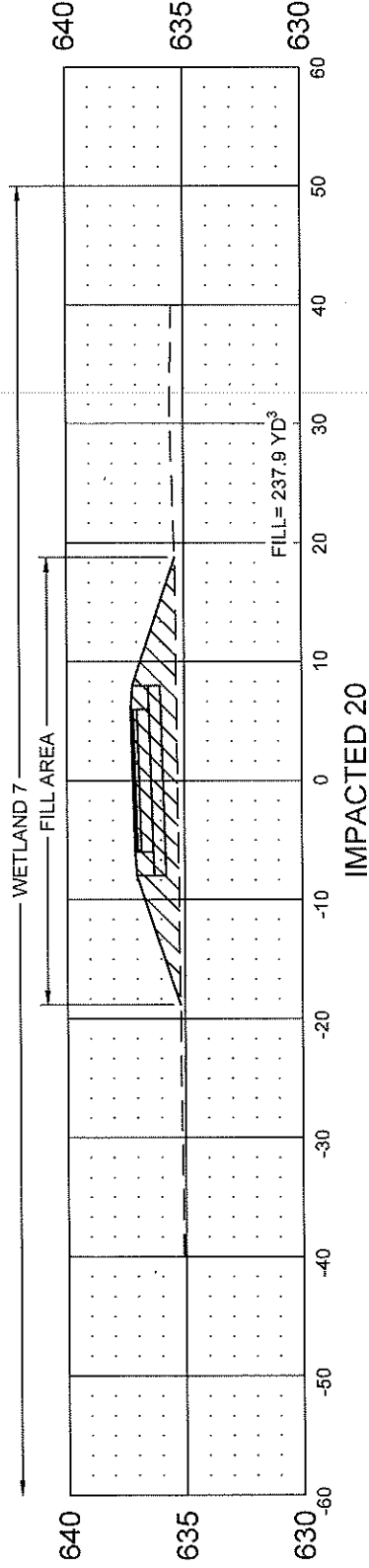
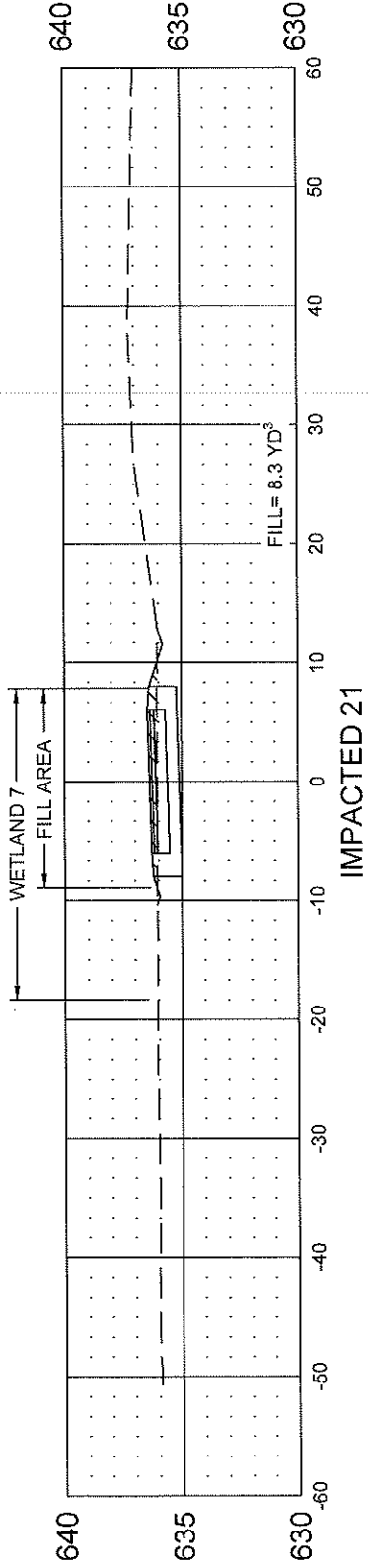


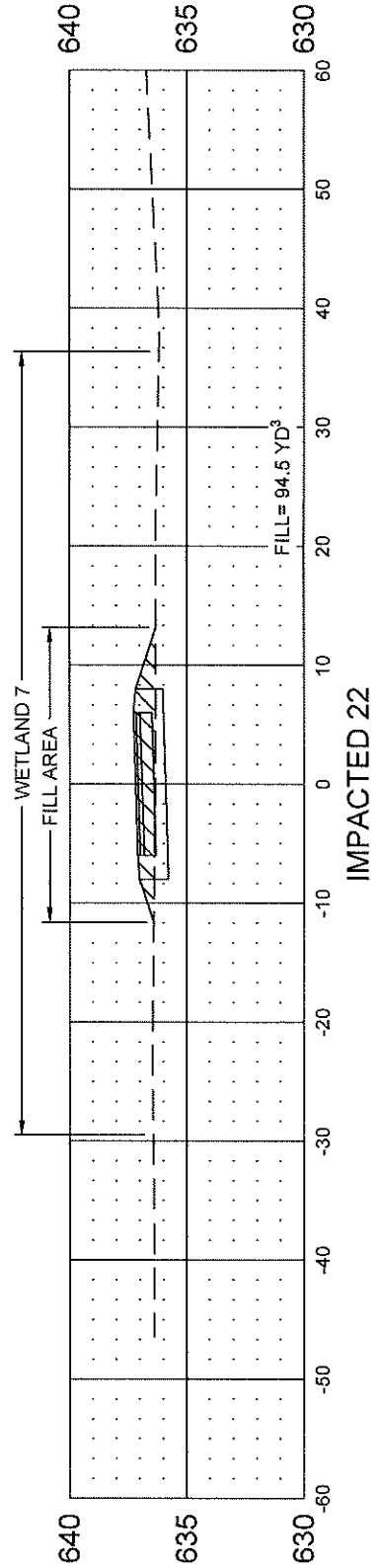
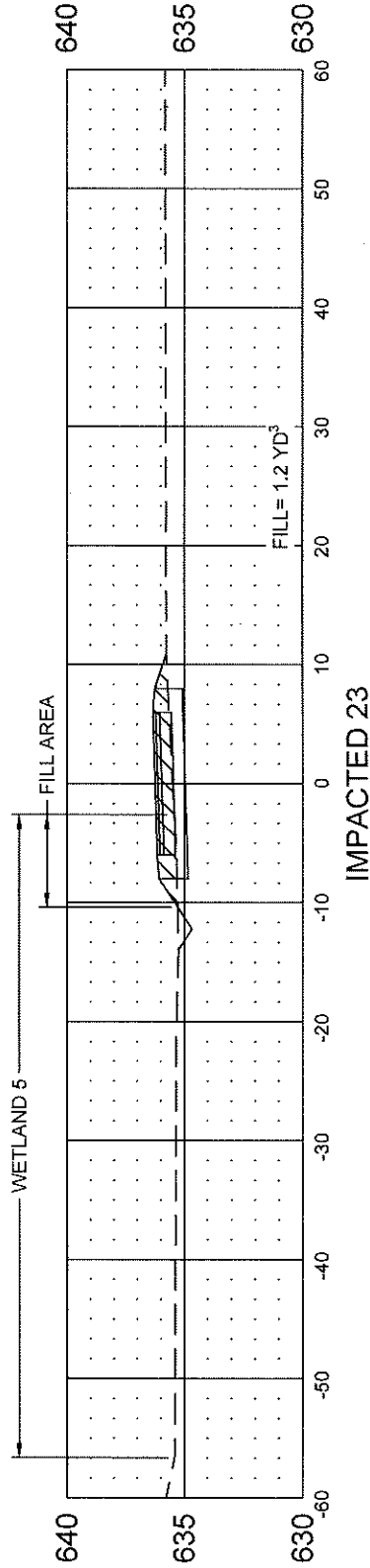
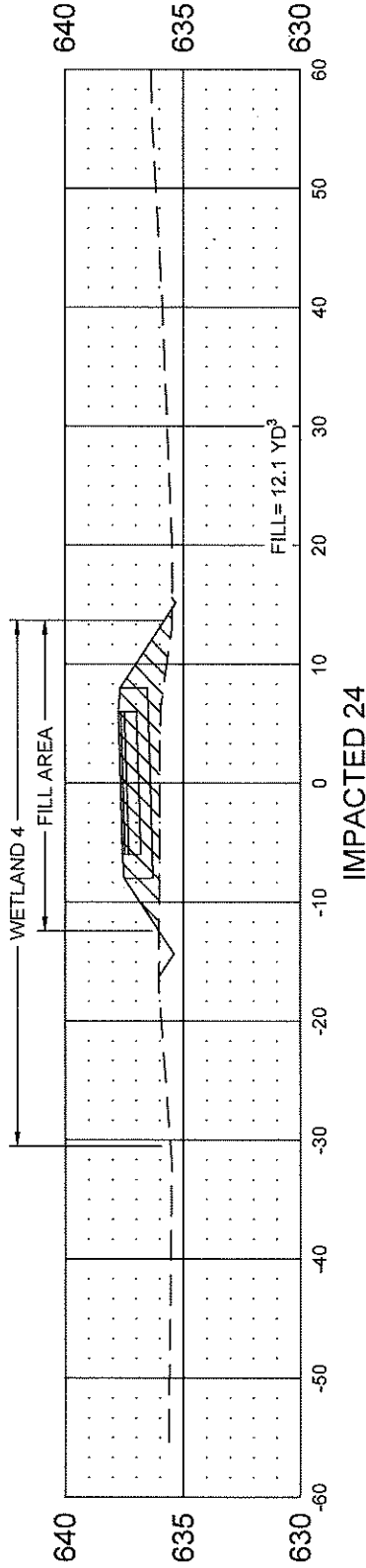
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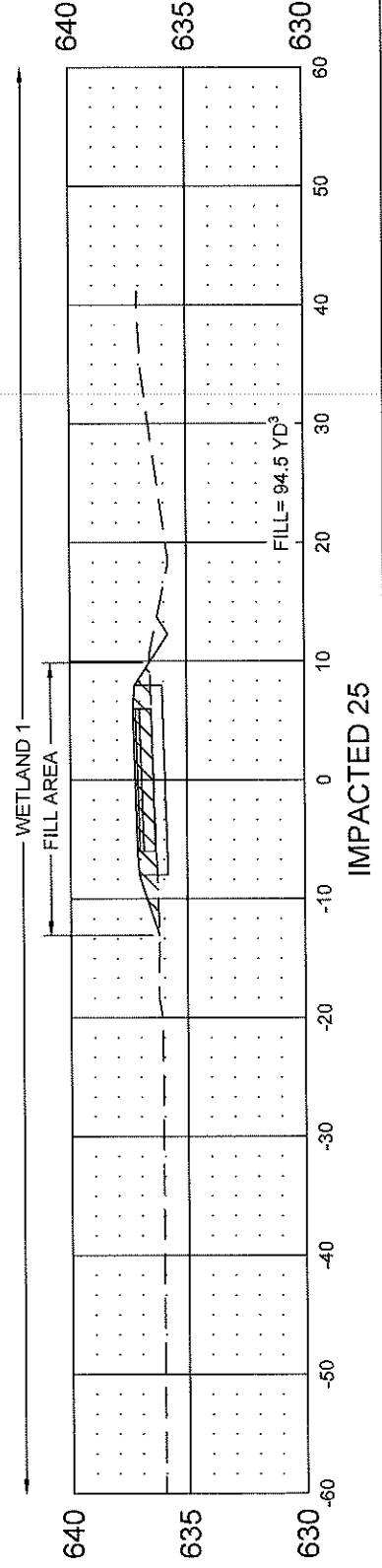
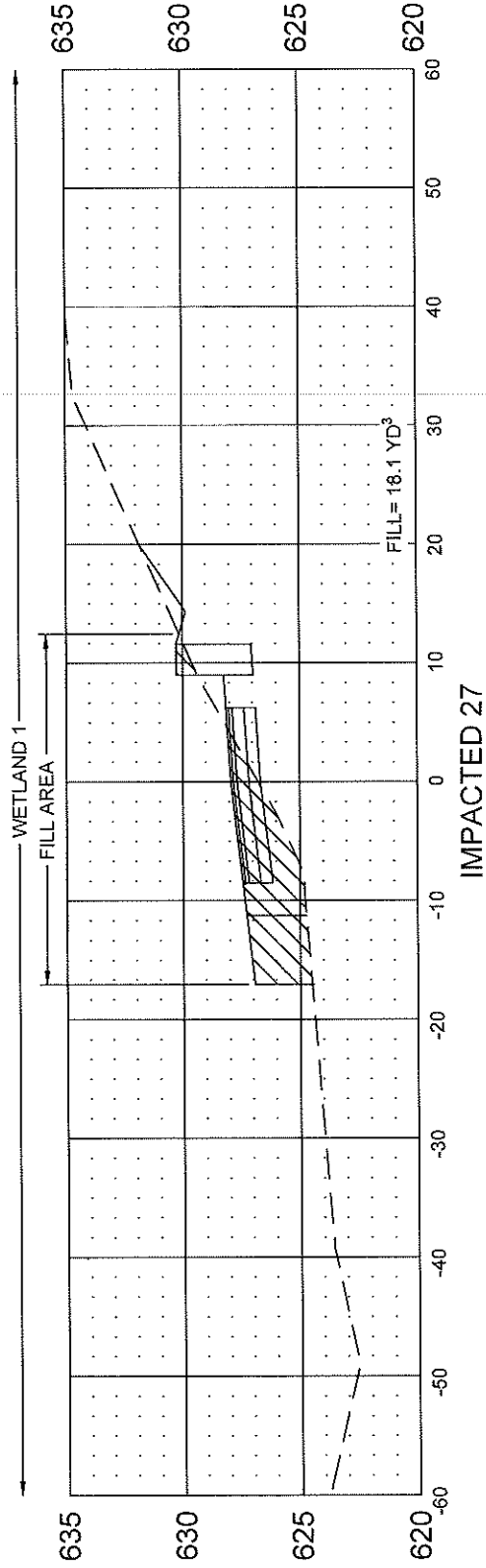


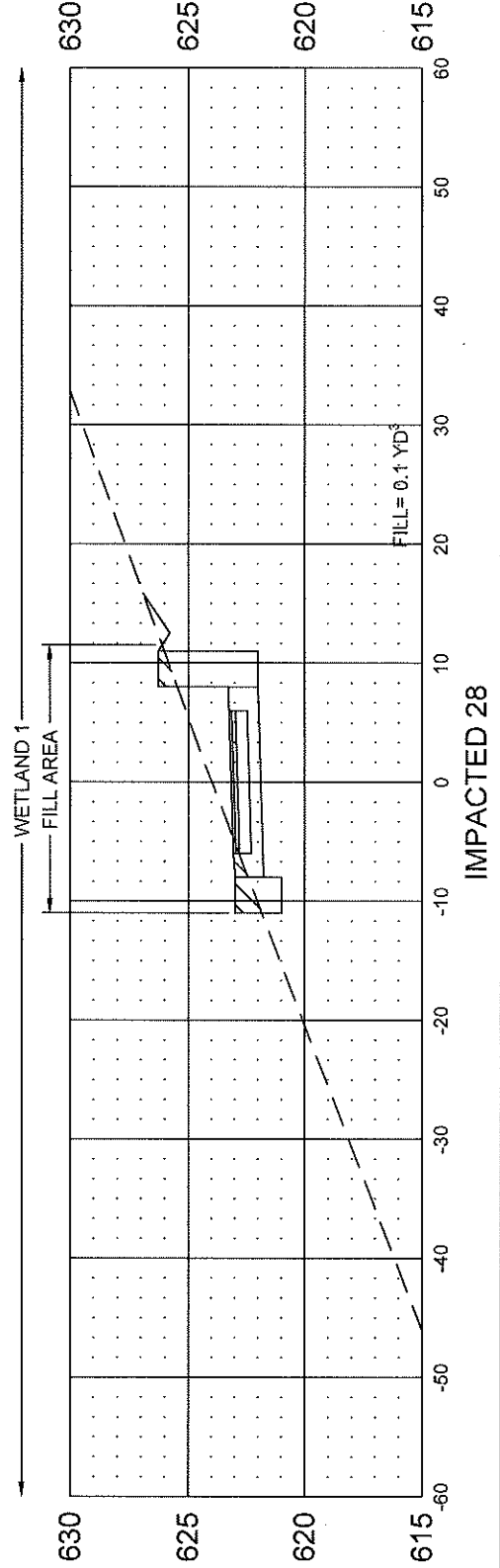
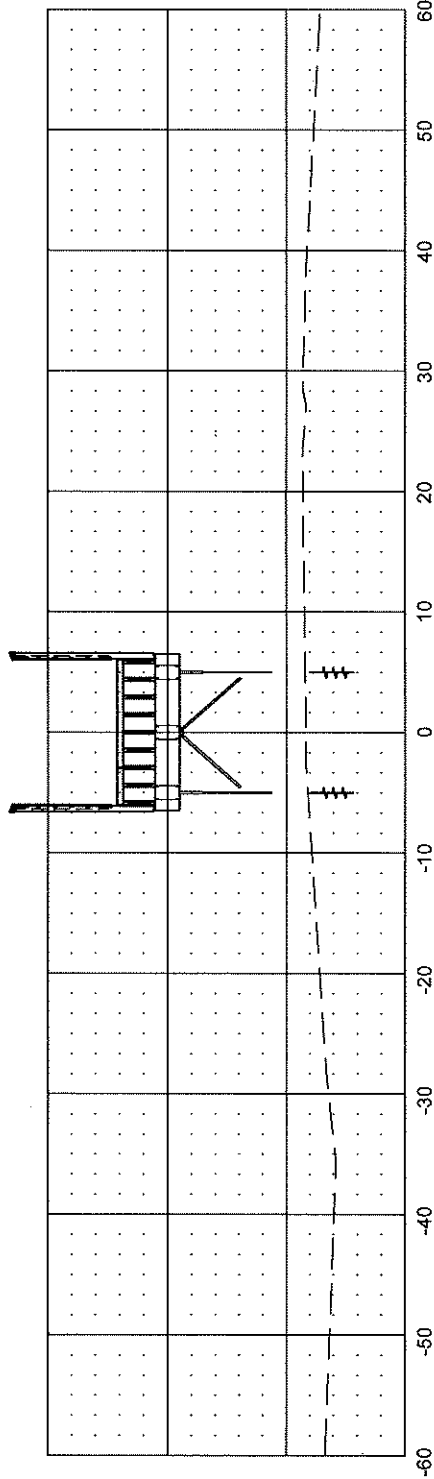












Appendix D: Impact Photos

MARQUETTE GREENWAY TRAIL PROJECT



Photo 1. Impact 1 (0.019 acres) in Wetland 1H, at the west end of the project area. Facing east, May 25, 2018. The forest is dominated by pin oak, reed canary grass, and multiflora rose.



Photo 2. Impact 6 (0.095 acres) in Wetland 1G, a forested wetland. Facing east, May 25, 2018.

MARQUETTE GREENWAY TRAIL PROJECT

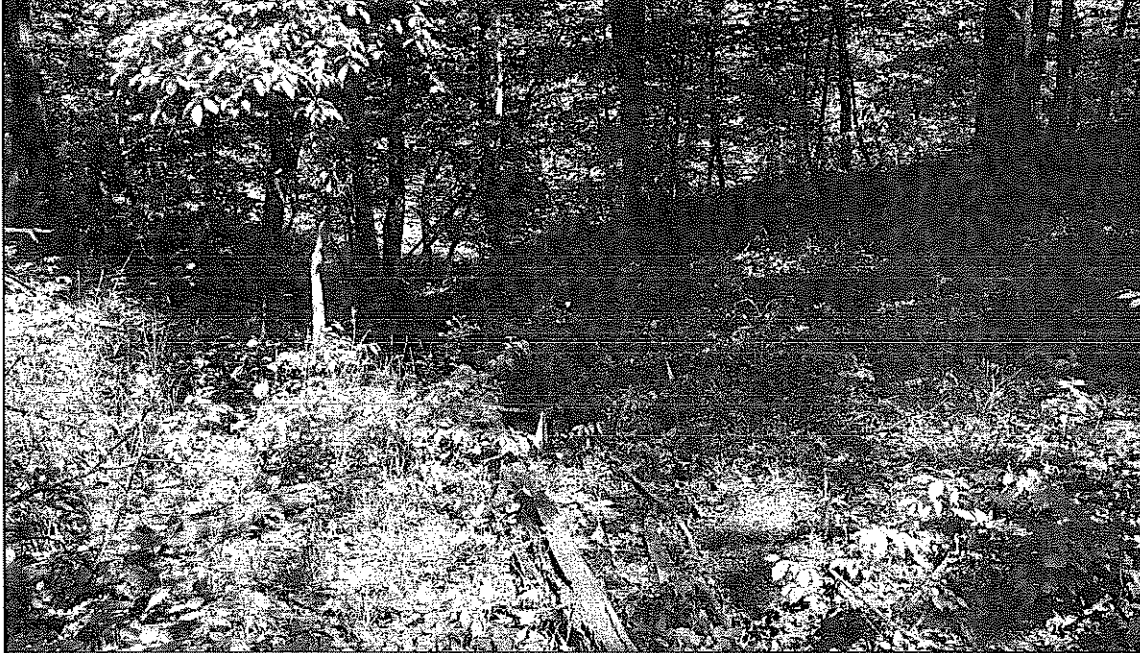


Photo 3. Impact 7(0.043 acres) in Wetland 1F. Facing north down the length of the drainage way as it drains downhill to the floodplain of the Little Calumet River (May 25, 2018).



Photo 4. Impact 8 (0.017 acres) in Wetland 1E. Facing north, May 25, 2018.

MARQUETTE GREENWAY TRAIL PROJECT



Photo 5. Impact 10 (0.082 acres) in Wetland 1D. Facing east, May 25, 2018.



Photo 6. Impact 12 (0.047 acres) within Wetland 1C. Facing north on May 15, 2018.

MARQUETTE GREENWAY TRAIL PROJECT



Photo 7. Impact 13 in Wetland 1B which was dominated by common reed (*Phalaris arundinacea*). This wetland drains through a drainage swale to the floodplain of the Little Calumet River. Facing north, May 15, 2018.

MARQUETTE GREENWAY TRAIL PROJECT



Photo 8. The trail will cross through Wetland 10 (Impact 14; 0.011 acres) which is an old ditch now located in a tree line. Facing east, May 15, 2018.



Photo 9. The trail will cross through two emergent wetland (old field) sections of Wetland 9. Impact 15 is 0.034 acres and Impact 16 is 0.051 acres. Facing northeast, May 15, 2018.

MARQUETTE GREENWAY TRAIL PROJECT



Photo 10. Impacts 17 (0.105 acres) and 18 (0.03 acres) are in a degraded, forested wetland section of Wetland 1, on the bluff above the floodplain. Facing east, May 15, 2018.



Photo 11. Impacts 19 (0.017 acres), 20 (0.72 acres), 21 (0.018 acres), and 22 (0.09 acres) are in Wetland 7 which runs along the back of house lots. Wetland 7 is left of the lawn in this photo. Facing east, July 24, 2018.

MARQUETTE GREENWAY TRAIL PROJECT



Photo 12. Impacts 25 (0.081 acres) and 26 (0.054 acres) are in a portion of Wetland 1 on the bluff above the river within NPS land. Impact 25 facing north, July 19, 2018.



Photo 13. Impact 27, shown (0.008 acres) and 28 (0.004 acres) each cross narrow drainage ways in the forest on the bluff above the river within NPS land. Facing north, October 16, 2019.

MARQUETTE GREENWAY TRAIL PROJECT



Photo 14. The boardwalk will run along the south side of the railroad tracks through a disturbed area that was recently impacted by reconstruction of the trail bridge. Mugwort and common reed were observed along the toe of slope here. Impact 29 (0.191 acres) is shown here facing SE; October 16, 2019.



Photo 15. Impact 30 (0.265 acres) is a boardwalk impact through the floodplain of the Little Calumet River. The pink stake marks the path of the boardwalk. Facing west, October 16, 2019. The train bridge is visible in the background.

MARQUETTE GREENWAY TRAIL PROJECT



Photo 16. Impact 31 (0.002 acres) in Wetland 2, a small smartweed (*Persicaria* sp.) dominated wetland. Facing north, July 19, 2018.

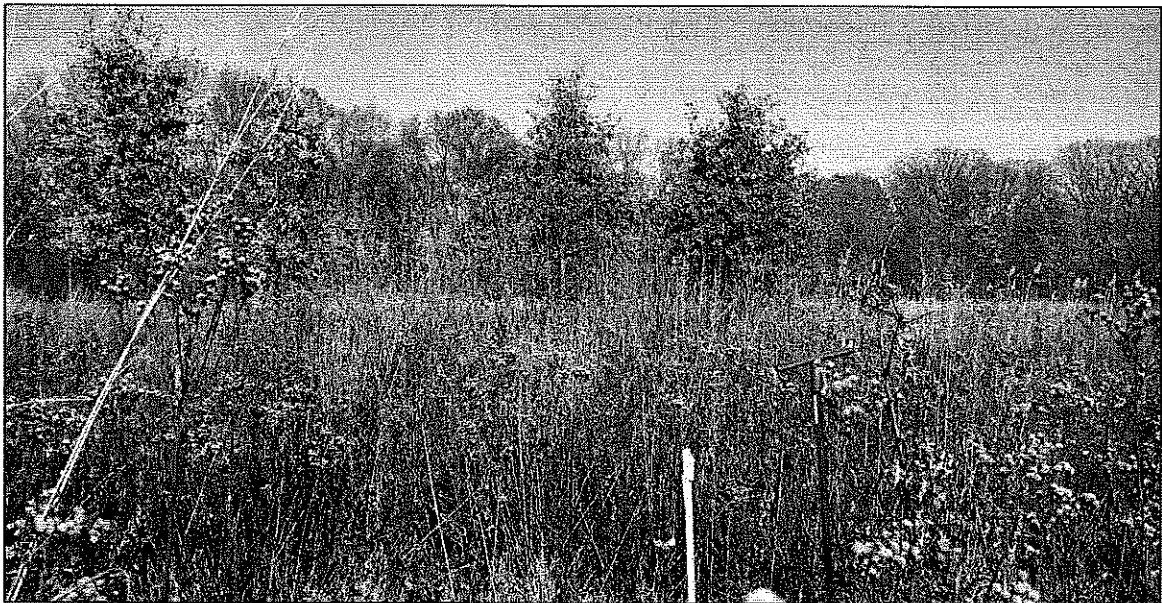


Photo 17. Impact 32 (0.056 acres) is a boardwalk impact through Wetland 1A within Mnoke Prairie. Facing northeast, November 30, 2017.



IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

Indiana Dunes National Park
1100 N. Mineral Springs Road
Porter, Indiana 46304-1299

May 11, 2020

Glen Peterson
SEH
9200 Calumet Avenue, Suite N300
Munster, IN 46321-2885

Dear Glen,

On the behalf of the Indiana Dunes National Park, we would like to express our support for the proposed wetland mitigation project at Mnoke Prairie for the Marquette Trail project. This mitigation project will help remedy the artificial drainage at Mnoke Prairie that was identified as a goal in our Resource Stewardship Strategy. We look forward to working with you on further development of the project.

Sincerely,

Daniel K. Plath
Chief of Resource Management
Indiana Dunes National Park

U.S. Army Corps of Engineers (USACE)
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved -
OMB No. 0710-0003
Expires: 02-28-2022

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: <http://dpcld.defense.gov/Privacy/SORNS/Index/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx>

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
--------------------	----------------------	------------------	------------------------------

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - Eric Middle - Last - Hull Company - Town of Burns Harbor E-mail Address - ehull@burnsharbor-in.gov	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First - John Middle - Last - McQuestion Company - Soil Solutions, Inc. E-mail Address - jmcquestion@soilsolutions-inc.com
6. APPLICANT'S ADDRESS: Address- 1240 N Boo Road City - Burns Harbor State - IN Zip - 46304 Country - US	9. AGENT'S ADDRESS: Address- 360 Indiana Avenue City - Valparaiso State - IN Zip - 46383 Country - US
7. APPLICANT'S PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 219-787-9413 219-787-1353	10. AGENTS PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 219-465-5885

STATEMENT OF AUTHORIZATION

11. I hereby authorize, John McQuestion, Soil Solutions to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.


SIGNATURE OF APPLICANT

May 27, 2020
DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions) Marquette Greenway Trail	
13. NAME OF WATERBODY, IF KNOWN (if applicable) emergent and forested wetland	14. PROJECT STREET ADDRESS (if applicable) Address City - Burns Harbor State- IN Zip- 46304
15. LOCATION OF PROJECT Latitude: °N 41.612704 Longitude: °W -87.132899	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID 64-03-32-300-006.000-024 Municipality Burns Harbor Section - Sect 32 Township - Township 37 North Range - Range 6 West	

17. DIRECTIONS TO THE SITE

The project area is a proposed three mile section of trail that runs through the town of Burns Harbor from the eastern town limits, West Beam Street and North Babcock Road through the Indiana Dunes National Park, across State Road 149, and roughly along the National Park Service (NPS) boundary to the western limits of Burns Harbor. The project area can be accessed from the west end of Navajo Trail behind the Burns Harbor municipal complex or north of the railroad tracks at the intersection of North Babcock Road and West Beam Street in Burns Harbor.

18. Nature of Activity (Description of project, include all features)

Several communities in Porter County are working to construct a portion of the Marquette Greenway Trail, a bike and pedestrian path along the south shore of Lake Michigan. When complete, the 58 mile trail will run from Chicago, Illinois to New Buffalo, Michigan. Burns Harbor has dedicated the funding to design and build a three mile portion of the trail as it runs through the town. The trail route has been designed to minimize impacts to wetlands and high quality plant communities. The trail begins at the west end of Beam Street, runs for about 1 mile through the Indiana Dunes National Park (IDNP) through Mnoke Prairie, down a forested hillslope to the floodplain of the East Branch of the Little Calumet River, under a railroad bridge, and back up to the top of the bluff again. After a mile the trail leaves NPS land and runs through old field and degraded swamp forest to end at the western limits of Burns Harbor. The trail surface will be a combination of boardwalk and asphalt or concrete trail. The trail through the floodway will be boardwalk. The trail through Mnoke Prairie will be a fireproof, raised concrete boardwalk. Most of the remainder will be asphalt. The trail will require impacts to 0.96 acres of wetland for construction of the trail.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The purpose of the project is to develop a paved trail through the Town of Burns Harbor as part of the Marquette Greenway Trail. The trail will be accessible from a parking lot at the west end of Navajo Trail. Eventually, the trail will continue to the east into the Town of Porter and west into the City of Portage. The project is being let in three phases. Phase 3 will begin construction on July 1, 2020. Phase 1 will be completed after, while Phase 2, the final phase will be completed by September, 2022.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

This is a linear project, a bike/walking trail, that will eventually be part of a much larger trail system stretching from Chicago, Illinois to New Buffalo, Michigan. The 12 foot wide trail will wind through a complex of prairie, upland forest, floodplain, old fields, and swamp forest. Scattered wetlands are found throughout the trail route. The trail will be a combination of paved trail on grade and raised boardwalk. Boardwalks will be installed throughout the length of the trail route through the floodplain of the East Branch of the Little Calumet River as well as through the Mnoke Prairie wetlands.

The reason for the discharge is to develop the trail surface.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
clean earthen fill; 1,425 cyds		

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.96 Acres
or
Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Wetlands were identified and delineated within a large 260 acre project area and the preliminary trail route and project limits were adjusted based on where high quality resources or wetlands were identified to minimize impacts to these resources. The trail was originally planned to be routed entirely through NPS land but based on the large amount of wetland resources within the NPS land and the difficulty and expense in repeatedly crossing the Little Calumet River, an alternative route further south was located. High quality wetland resources were identified on NPS land so the Town of Burns Harbor acquired land further south of the initial planned route in order to minimize impacts.

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- 317 Navajo Trail

City - Burns Harbor

State - IN

Zip - 46304

b. Address- 3210 Watling St MC 8-229

City - East Chicago

State - IN

Zip - 46312

c. Address- 1100 N Mineral Springs Road

City - Porter

State - IN

Zip - 46304

d. Address- 319 Navajo Trail

City - Burns Harbor

State - IN

Zip - 46304

e. Address- 317 Navajo Trail

City - Burns Harbor

State - IN

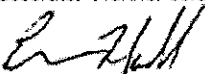
Zip - 46304

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
IDEM	Rule 5		2020-06-01		
DNR	Const. in a floodway		2020-06-15		
IDEM	401WQC		2020-06-01		

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.


SIGNATURE OF APPLICANT

May 27, 2020
DATE

SIGNATURE OF AGENT

DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.